



Final



Source Area Investigation Report

6714 Walker Street Site
St. Louis Park, Minnesota

Daikin Applied Americas Inc. and Super Radiator Coils, LP

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List of Acronyms

AS	Air Sparging
AST	above ground storage tank
BAM	bioavailable absorbent material
bgs	below ground surface
C12DCE	cis-1,2-dichloroethene
CSM	Conceptual Site Model
Daikin Applied	Daikin Applied Americas, Inc.
DCE	1,2-dichloroethene
DHC	Dehalococcoides
ERA	Evaluation of Remediation Alternatives
ERH	Electrical Resistance Heating
EVO	emulsified vegetable oil
EZVI	emulsified zero-valent iron
GHD	GHD Services Inc.
ISCO	in-situ chemical oxidation
ISCR	in-situ chemical reaction
ISEB	in-situ enhanced biodegradation
ISV	intrusion screening value
NaOH	sodium hydroxide
ORIN	ORIN Technologies, LLC
ORP	oxidation-reduction potential
PCE	perchloroethene
PCR	polymerase chain reaction
PID	photoionization detector
ROs	Remediation objectives
ROW	Right of Way
SAI	Source Area Investigation



SI	Site Investigation
Site	6714 Walker Street
SLV	soil leaching value
SRCLP	Super Radiator Coils, LP
SVE	soil vapor extraction
TCE	trichloroethene
TOD	total oxidant demand
USCS	Unified Soil Classification System
USGS	United States Geological Survey
VAP	vertical aquifer profiling
VC	vinyl chloride
VOCs	volatile organic compounds
ZVI	Zero-valent iron



1. Introduction

GHD Services Inc. (GHD) prepared this Source Area Investigation (SAI) Report on behalf of Daikin Applied Americas Inc. (Daikin Applied) and Super Radiator Coils, LP (SRCLP). The SAI Report presents the results of the investigation conducted underneath the 6714 Walker Street (Site) property. The investigation focused on identifying and delineating the suspected source of soil vapor and groundwater contamination at the Site.

The SAI was conducted in accordance with the SAI Work Plan, dated May 2017. Under the SAI, GHD:

- i) Investigated the nature and extent of groundwater contamination within the glacial drift aquifer in the suspected source area underneath the 6714 Walker Street building
- ii) Investigated other potential source areas at the 6714 Walker building site that may have handled or stored chlorinated solvents
- iii) Investigated low permeability deposits in the glacial drift for possible contaminant storage
- iv) Investigated the nature and extent of volatile organic compounds (VOCs) in soil gas within the unsaturated glacial drift underneath the 6714 Walker Street building
- v) Collected soil gas, soil, and groundwater samples to delineate contamination underneath the 6714 Walker Street building.
- vi) Conducted bench scale testing to evaluate potential groundwater remedial technologies
- vii) Evaluated potential remedial technologies.

Section 2 discusses the site history and historical site investigation activities. Section 3 describes the SAI field activities. Section 4 presents the analytical results. Section 5 presents the Conceptual Site Model (CSM) and remediation objectives. Section 6 discusses remediation alternatives. Section 7 provides a summary and recommendation.

2. Background

2.1 Site Location

The Site is located at 6714 Walker Street in St. Louis Park, Minnesota. The Site location is provided on Figure 1. The site encompasses approximately 0.62 acres. The building was constructed in late 1940s and underwent expansion in the 1950s and late 1960s. The current building encompasses an area of 18,000 (approximate) square feet (ft²) on a 0.62 acre (27,000 ft²) property. The property is surrounded by mixed commercial, industrial, and residential buildings. Figure 2 provides a Site Plan and identifies the various building expansions.



2.2 Past Operations

Historic use of the Site began in 1949 as a metal fabrication operation. Manufacturing operations ended in 1998. For a period, these operations utilized a solvent degreaser. Tetrachloroethene, also known as perchloroethene (PCE), was used as a solvent to clean parts. Three former degreasing units were used inside the building. Degreaser No. 1 was used from approximately the mid-1950s to the late 1960s. Degreaser No. 1 was located in the 1950s building expansion that is listed as Former Degreaser Area No. 1 (see Figure 2). Degreaser No. 1 was replaced by Degreaser No. 2 in the late 1960s when an addition was added to the building. Degreaser No. 2 was placed inside its own room within the new building addition (see Figure 2) and is listed as Former Degreaser Area No. 2. Degreaser No. 2 operated until it was replaced in approximately 1984. Degreaser No. 3 operated in the same location as Degreaser No. 2, but was installed partially below grade in a concrete vault and with a stainless-steel outer lining. Degreasing operations ceased in 1998.

GHD reviewed documents such as building and electric permits, hazardous waste manifests, and site inspection correspondence. However, the documents did not include any viable information on the handling, storage, or disposal of degreasing solvents for the 1950s and 1960s. Starting in 1973, the records show that PCE was stored outside in a 1,000 gallon above ground storage tank (AST) along the north side of the building. In 1984, a new PCE storage tank was installed, apparently with the new degreaser (No. 3), inside the building. PCE was stored inside the building in an AST located on the second floor mezzanine. The former PCE ASTs are shown on Figure 2.

After 1998, the Site was a food cooperative (Emergency Foodshelf Network, Inc.) until it was sold to the present owner (CPE Exchange 25246, LLC) in 2005. Currently, the building is used as a merchandise warehouse under the name of Tall Sales Company.

2.3 Hydrogeologic Conditions

2.3.1 Site Geology

The geology at the Site is comprised of glacial deposits that overlie sedimentary bedrock. The primary geologic units of concern (starting at the surface) are:

- Glacial deposits (Drift)
- Platteville Limestone
- Glenwood Shale

A brief description of each unit is provided below.

The glacial drift deposits are Des Moines Lobe outwash, which is predominantly a mixture of sand, loamy sand, and gravel (MGS, 1989)¹. In the nearby area, there are also post glacial organic peat deposits and buried wetlands. The glacial deposit is approximately 50 to 100 feet (ft) thick across the area. Further studies by the United States Geological Survey (USGS) showed that the glacial

¹ Minnesota Geological Survey. 1989. Geological Atlas Hennepin County, Minnesota. County Atlas Series, Atlas C-4.



deposit can be interbedded with discontinuous fine grained units of sandy and silty clay (Lindgren, 1995)².

In 2016, GHD drilled 10 soil borings at the Site as part of the Site Investigation work (see Section 3). The soil borings were drilled from 50 to 75 ft below ground surface (bgs). The soils borings noted well graded sand and gravel to 75 ft bgs. No substantial fine grained clay units were observed at the boring locations.

The Platteville Limestone underlies the glacial deposit. The Platteville Limestone is a dolomitic limestone that contains thin shale layers. The Platteville Limestone is approximately 30 ft thick and is underlain by the Glenwood Shale. The Glenwood Shale is a calcareous sandy shale unit and is approximately five feet thick.

2.3.2 Site Hydrogeology

The primary groundwater units at the Site include two aquifers and one aquitard. Aquifers are geologic units that can readily transmit economic quantities of groundwater. Aquitards are geologic units that impede groundwater movement. The primary groundwater units related to the Site are:

- Glacial aquifer (also known as the drift aquifer)
- Platteville aquifer
- Glenwood aquitard

The glacial aquifer is the uppermost groundwater bearing unit and is also known as the water table aquifer. Groundwater occurs in the glacial aquifer at approximately 45 ft bgs (GHD, 2016³). Hydraulic conductivities in the glacial deposit are variable and typically range from 50 to 500 ft per day (ft/d) (Lindgren, 1995). Regional groundwater flow in the glacial drift aquifer is to the east (AECOM, 2015)⁴.

The Platteville aquifer is hydraulically connected to the overlying glacial aquifer. Regional groundwater flow in the Platteville aquifer is similar to the glacial aquifer with an easterly flow pattern. The hydraulic conductivity of the Platteville aquifer is typically 275 ft/d (Lindgren, 1995); however, it can be significantly less in the more shale rich portions of the limestone.

The underlying Glenwood shale is an aquitard that inhibits hydraulic movement between the overlying Glacial and Platteville aquifers and the underlying St. Peter aquifer. The Glenwood shale has a low vertical hydraulic conductivity of approximately 9×10^{-6} ft/d (Norvitch and others, 1974)⁵.

2.3.3 Previous Site Activities

The MPCA has conducted numerous investigative activities at the Site since 2009 as part of a regional study referred to as the St. Louis Park Solvent Plume Superfund site, which has been

² Lindgren, R. J. 1995. Hydrogeology and Groundwater Flow on the Drift and Platteville Aquifer System, St. Louis Park, Minnesota. United States Geological Survey, Water Resources Investigation Report 94-4204

³ GHD Services, Inc., Site Investigation Report, 6714 Walker Street, June 9, 2016.

⁴ AECOM, St. Louis Park Investigation, April 2015.

⁵ Norvitch, R. F., Ross, T. G., and Brietkrietz, Alex. 1974. Water Resources Outlook for the Twin Cities Metropolitan. Metropolitan Council of the Twin Cities. 219 pgs



ongoing since 2007. On-site investigations were conducted in 2009, 2010, 2011, 2014, 2015, and 2016 and were summarized in the SAI Work Plan (GHD, 2017⁶). These investigations involved passive soil gas sampling (i.e., Gore™ Sorbers), soil vapor probe installation and sampling, and soil and groundwater sampling using direct push borings.

In 2016, Daikin Applied and SRCLP conducted a Site Investigation (SI) at the Site to investigate the nature and extent of chlorinated VOCs in glacial drift aquifer and unsaturated soils surrounding the Site. Daikin Applied and SRCLP submitted the SI results on June 9, 2016 to the MPCA in a report entitled "Site Investigation Results, 6714 Walker Street Site." The work conducted under the SI provided the basis for conducting the SAI.

These activities focused in and around the 6714 Walker Street property. SI work occurred at the Site and within the City of St. Louis Park Right of Way (ROW).

The following SI activities were conducted:

- Advanced ten direct push probe borings for vertical aquifer groundwater (VAP) profiling in and around the Site
- Installed two monitoring wells near the former outside PCE AST area
- Installed two soil vapor probes inside the building
- Collected two rounds of groundwater samples for VOCs, dissolved gases, and general water chemistry analysis from new and existing nearby monitoring wells
- Collected two rounds of soil gas samples from the soil vapor probes for VOC analysis
- Performed hydraulic monitoring and hydraulic testing

The VAP boring, vapor probe, and monitoring well locations are shown on Figure 3.

The SI results identified chlorinated and non-chlorinated VOCs in the glacial drift aquifer including PCE. The highest on-Site PCE groundwater concentrations were detected near the top of the glacial drift aquifer (approximately 50 feet bgs) at MW-1A with concentrations ranging from 28,000 to 45,000 micrograms per liter (µg/L). Groundwater monitoring well sample results are presented on Figure 4. The groundwater results showed PCE, in particular, and other chlorinated VOC concentrations diminish with depth at several VAP locations (Figure 5).

Two soil gas probes (SV1 and SV2) were installed inside 6714 Walker Street building near the two former degreaser locations (Figure 2). The soil gas probe samples detected PCE ranging from 10,000 and 26,000 micrograms per cubic meter (µg/m³); these soil gas results were unexpected based on previous soil gas sampling data collected in March 2015 (AECOM, 2015⁷). The March 2016 soil gas probe results exceeded the MPCA guidance criterion of 100 times (100X) the interim indoor air intrusion screening value (ISV) for PCE, which is 33 µg/m³. Additional investigative efforts were undertaken to identify the nature and extent of the shallow soil gas underneath the building. Shallow soil is defined as the upper 15 feet of soil directly underneath the building.

⁶ GHD Services, Inc., Source Area Investigation Work Plan, April 20, 2017.

⁷ AECOM. St. Louis Park Investigation, dated April 2015



Additional investigative efforts included the following activities:

- Installation of seven sub slab (SS) vapor pins throughout the building
- Installation of two nested shallow soil vapor probes inside the building and one shallow vapor probe outside the building
- Installation of two shallow soil vapor extraction (SVE) wells
- Collection of soil gas samples

The soil vapor probes and sub slab pin locations are shown on Figure 2. PCE was identified as the primary VOC in the soil gas samples with concentrations ranging from 1,100 to 80,000 $\mu\text{g}/\text{m}^3$. Based on the results of the expanded soil gas sampling program, a SVE Pilot Test program was conducted to evaluate shallow soil remediation and establish a vacuum underneath the building to prevent potential vapor intrusion. GHD submitted a Pilot Test Work Plan to the MPCA on May 12, 2016, ran the test from May 26 through June 20, 2016.

The pilot test results showed a significant reduction in PCE concentrations at the end of the study. The SVE system also created a vacuum directly under the concrete slab under a majority of the building. At the end of the pilot study, Daikin Applied and SRCLP decided to continue operating the SVE system because it provides protection to the occupants of the building and removes VOCs from the shallow soil. GHD submitted a Pilot Test Report to the MPCA on July 21, 2016.

In September 2016, another round of soil gas samples was collected from soil vapor probes and sub-slab pin locations. Figure 6 shows the soil gas results before and after the SVE system became fully operational on May 31, 2016. As shown on Figure 6, the soil gas concentrations have decreased by orders of magnitude at all soil vapor and sub slab locations. These decreasing concentrations indicate that the suspected PCE source in the shallow soil is being removed.

3. SAI Field Activities

Under the SAI, GHD conducted the following activities to further investigate the nature and extent of contamination in the glacial drift, both horizontally and vertically, underneath the 6714 Walker Street building:

- Advanced 3 direct push probe borings for vertical aquifer profiling (VAP) in the former degreaser No. 2 area and collected a minimum of three soil and six water samples at each VAP location
- Installed 5 nested probes inside the building and two nested probes outside the building
- Installed a nested vapor probe in the former degreaser No. 2 area
- Installed 3 shallow gas probes near former loading and waste storage areas.
- Collected 21 soil samples above and below the water table for VOC analysis
- Collected 46 groundwater samples prior to installing vapor probes for VOC analysis
- Collected groundwater samples from MW-1A and MW-1B for VOC analysis
- Collect 40 soil gas samples from gas probes and sub slab pins for VOC analysis



3.1 Vertical Aquifer Profiling

VAP was conducted at three direct-push soil borings (VAP-11, VAP-12, and VAP-13) in the former degreaser area. VAP was performed throughout the building at the following seven soil vapor probes: SV-2, SV-4, SV-5, SV-6, SV-7, SV-8, and SV-9. The VAPs characterized the soil and groundwater underneath and adjacent to the 6714 Walker Street building. The VAP locations are shown on Figure 7.

The direct-push borings were advanced from the ground surface through the glacial drift. In the former degreaser area, the borings were advanced to 75 feet below ground surface (bgs). The soil vapor probe borings to 62 feet bgs. Continuous soil samples were collected unless the direct-push probe encountered blockage, which occurred at VAP-12.

A GHD representative field classified the soils in accordance with the Unified Soil Classification System (USCS). Recovered soil samples were continuously screened for organic vapors using a 10.6 eV photoionization detector (PID). GHD examined and identified low permeability soil layers containing predominantly silt and clay to evaluate whether they contain VOCs. Few small silt layers were encountered during the drilling program. Any low permeable soil layer was sampled for VOCs.

During the boring advancement inside the former degreaser No. 2 area, VAP-11 and VAP-13 encountered fill material that had been placed in a former sub-grade degreaser vault. The former degreaser vault held former degreaser No.3 in the sub-grade concrete vault. After degreaser No. 3 was taken out of service, the concrete vault was filled in with non-native pea gravel and covered with a six-inch layer of concrete to match building floor grade. The concrete vault area was approximately 15 feet long, six feet wide, and eight feet deep. The base of the vault consisted of approximately one foot of concrete. The installation of VAP-11 and VAP-13 through the former vault encountered this backfilled material and encountered approximately 1 foot of concrete at the base of the vault. Soil boring logs are presented in Appendix A.

3.1.1 Soil Sampling

Soil samples were collected for VOC analysis from selected intervals. In the degreaser area, samples were collected from the 1-3.5 ft and 4-7 ft depth intervals from VAP-11 and VAP-12. Soil samples were also collected from the unsaturated zone at 25 and 35 feet bgs unless refusal was encountered. At VAP-13, GHD collected soil samples below the concrete vault at 10 feet and 15 feet bgs.

GHD collected soil samples at the SV probe locations below the water table for VOC analysis, if low permeability soil was encountered. In addition, soil samples were collected for VOC analysis based on one of the following criteria: visual or olfactory evidence, elevated PID measurements (i.e. > 10 ppm), or the presence of low permeable soil. Soil samples were collected using EPA Method 5035A (Terra Core Soil Sampler®) and analyzed for low level VOCs using EPA method 8260. Soil sample were shipped under standard chain of custody procedures within 48 hours of sample collection. Table 1 provides a soil sampling summary.



3.1.2 Groundwater Sampling

Groundwater samples were collected at the following intervals: 46-50 feet bgs, 50-54 feet bgs, 54-58 feet bgs, 58-62 feet bgs from each direct deep direct-push boring location. Additional groundwater samples were collected from the three VAP borings in the degreaser area at 63-67 ft bgs and 71-75 ft bgs. GHD collected 50 groundwater samples using direct push boring methods. Groundwater samples were used to define the nature and extent of VOCs within the glacial drift aquifer underneath the Site.

VAP groundwater samples were collected using a screen well point. Upon reaching the selected depth, the direct push rods were pulled back to expose the sampling screen. The temporary well was purged via positive displacement using new polyethylene tubing attached to a foot check valve. Approximately three well screen volumes were purged prior to sampling. GHD collected the following field parameters prior to sample collection: pH, temperature, conductivity, and oxidation-reduction potential (ORP). Groundwater samples were analyzed for VOCs using EPA Method 8260. Groundwater samples were shipped to the laboratory within 48 hours of collection under standard chain of custody procedures. Table 2 presents a groundwater sampling summary.

The direct push equipment was decontaminated between each boring location and each sample interval. The borings were backfilled with bentonite slurry to approximately 1-foot bgs. The remaining annulus was filled with concrete.

3.2 Soil Vapor Probe Installation

Twenty-three soil vapor probes were installed inside and outside the building. Soil gas probe locations are shown on Figure 7. Probe locations SV-2 and SV-4 through SV-9 included nested soil gas probes in the shallow and deep unsaturated soil. Three shallow soil gas probes (SV-10 through SV-12) were installed in potential loading and storage areas. These probes, along with the existing six soil gas probes, provided a three-dimensional profile of the soil gas concentrations underneath, and immediately adjacent to the building and to verify contaminant sources. Soil vapor probes were labeled sequentially according to depth with "A" being the shallowest probe and "D" being the deepest probe.

A direct push soil boring was advanced at the soil vapor probe location. GHD collected and logged continuous soil samples in accordance with the USCS. GHD screened recovered soil samples for organic vapors with a PID. For the three shallow probes (SV-10A, SV-11A, and SV-12A), the borehole was advanced using a slide hammer with a stainless-steel screen.

A Geoprobe® screen implant (approximately 0.5-foot in length) was installed at the designated depth. The screen connected to a 1/4-inch outside diameter polyethylene sample tubing of sufficient length to extend above the ground surface. A sand pack was placed below and around the screen to six inches above the screened interval. A 1-foot thick dry granular bentonite was placed above the sand pack and then was hand-hydrated. The remainder of the borehole was filled with pre-hydrated granular bentonite (slurry) to ground surface. The probe was completed as an at-grade construction. Soil vapor probe construction logs are in Appendix A.



3.3 Monitoring Well Sampling

Monitoring wells MW-1A and MW-1B were sampled for VOCs. Monitoring well locations are shown on Figure 2.

Groundwater samples were collected using low flow purge and sample procedures. Groundwater was purged at a rate of 500 milliliters per minute (mL/min) or less using dedicated polyethylene tubing. Field measurements were recorded every five minutes during the purging process to ensure stabilization. Purging continued until the following parameters show three consistent measurements:

- pH ± 0.1 pH units of the average value of the three readings
- temperature ± 3 percent of the average value of the three readings
- conductivity ± 0.005 milliSiemen per centimeter (mS/cm)
- ORP ± 10 millivolts (mV) of the average value of the three readings
- DO ± 10 percent of the average value of the three readings
- Turbidity ± 10 percent of the average value of the three readings

Upon reaching stabilization, samples were collected for VOC laboratory analysis (EPA Method 8260).

Groundwater samples were placed in iced coolers quickly after collection. Groundwater samples were shipped to a state-certified laboratory, via commercial courier, under standard chain of custody procedures. A groundwater sampling summary is provided on Table 2.

3.4 Soil Gas Sampling

GHD collected soil gas samples from the existing and newly installed interior soil gas probes. The soil vapor probes were sampled in accordance with the procedures presented in Appendix B. Soil gas samples were shipped to the laboratory under standard chain of custody procedures for analysis of VOCs using EPA Method TO-15. A soil gas probe sampling summary is provided in Table 3.

3.4.1 Sub-Slab Probe Sampling

GHD collected soil gas samples from the nine existing sub slab pins (see Figure 7). The sub slab pin sample data assessed the effectiveness of the current shallow SVE system, which has been operating continuously since May 31, 2016. The sub-slab pins were sampled in accordance with the steps presented in Appendix B. Sub-slab probe samples were submitted to the laboratory under standard chain of custody procedures for analysis of VOCs using EPA Method TO-15. The sub-slab pin sampling summary is provided in Table 3.



4. SAI Sampling Results

This section presents the soil, soil gas, and groundwater analytical results from the SAI. Analytical laboratory reports and GHD data validation memorandums are in Appendix C.

4.1 Soil Sampling Results

GHD collected soil samples from 21 locations above and below the water table with 15 samples collected in the former degreaser area. Soil sample results are summarized in Table 4. PCE was the most frequently detected VOC with concentrations ranging from <3.7 micrograms per kilogram ($\mu\text{g}/\text{kg}$) to 2,100 $\mu\text{g}/\text{kg}$. C12DCE was detected primarily below the water table with the highest concentration reported at VAP-11 at 74 feet bgs with an estimated concentration of 2,000 $\mu\text{g}/\text{kg}$. Petroleum hydrocarbons, including naphthalene, were detected at locations above and below the water table. Figure 8 presents the soil sample results for PCE, C12DCE, and BTEX underneath the former degreaser area.

4.2 Soil Gas Sampling Results

Soil gas samples were collected from sub-slab pins and nested soil vapor probes to confirm the SVE system is protecting the occupants at 6714 Walker Street, the shallow soil gas still demonstrates decreasing VOC concentrations, and to identify the nature and extent of VOCs in the deep soil gas. A summary of detected soil gas sampling results is presented in Table 5. Figures 9, 10, and 11 present the soil gas results for the sub-slab pins, shallow soil gas probes and deep soil gas probes, respectively.

PCE remains the primary VOC in soil gas with concentrations ranging from non-detect (<2.7 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]) to 2,000 $\mu\text{g}/\text{m}^3$. The area under former degreaser No.2 and No. 3 (VAP-12) reported the highest soil gas results. The three shallow probe samples installed in former loading and storage areas (SV-10A, SV-11A, and SV-12A) showed low VOC concentrations and are not indicative of being potential contaminant source areas. Figure 9 shows all sub-slab samples remain below the PCE action intrusion screening value (ISV) criterion of 33XISV (1,100 $\mu\text{g}/\text{m}^3$).

4.3 Groundwater Sampling Results

A total of 52 groundwater samples were collected to horizontally and vertically delineate the water quality within the glacial drift aquifer underneath the Site with particular emphasis in the former degreaser area where three VAP borings were advanced. Groundwater sampling results are presented in Table 6. As noted on Table 6, PCE and C12DCE were the most predominant VOCs detected. PCE was the dominant VOC in the shallow portion of the glacial drift aquifer. As for C12DCE, concentrations of significance from a source or sources upgradient of 6714 Walker Street were found migrating beneath the Site at elevated concentrations in the deep portion of the glacial drift aquifer. Figures 12, 13, and 14 provide PCE and C12DCE results for three different elevation (in feet above mean sea level (ft. amsl)) zones in the glacial drift aquifer: upper (882-872 ft. amsl), intermediate (872-862 ft amsl), and deep (862-847 ft. amsl) zones. These figures show that PCE is present below and downgradient of the former degreaser areas.



Along with CVOCs, petroleum hydrocarbons naphthalene, benzene, toluene, and xylene are detected at several locations. These compounds are likely attributable to an upgradient source, such as the Reilly Tar Superfund site, a known petroleum hydrocarbon source.

4.4 Bench Scale Testing Results

As part of the source area investigation, soil and groundwater samples were collected for bench scale testing. The bench scale testing evaluated the application of the following in-situ remediation technologies: in-situ chemical oxidation (ISCO), in-situ enhanced biodegradation (ISEB), and in-situ chemical reaction (ISCR), and bioavailable absorbent material (BAM). GHD composited saturated and unsaturated soil samples from the VAP borings inside the former degreaser area. Groundwater samples were collected from MW1A.

Approximately 10 pounds of soil and 3 gallons of groundwater were shipped to the GHD laboratory in Niagara Falls, New York in iced coolers under standard chain of custody procedures for bench-scale testing of ISCO, ISEB, and ISCR. Four (4) liters of groundwater were shipped to ORIN Technologies, LLC (ORIN) in Verona, Wisconsin under standard chain of custody procedures for bench scale testing of BAM.

This section summarizes the bench scale testing results. Technical memorandums of the bench scale testing results are presented in Appendix D.

The bench scale study gathered data to:

- i) Determine effectiveness of chemical oxidation for the treatment of PCE in Site soil and groundwater
- ii) Assess the total oxidant demand (TOD) of the soil
- iii) Assess the potential of the chemical oxidants to solubilize metals into groundwater
- iv) Determine the most effective oxidant and dose for chemical oxidation
- v) Determine the potential of biodegradation under anaerobic conditions for treatment of PCE in Site soil and groundwater
- vi) Determine the most effective amendment(s) and doses to stimulate ISEB or ISCR
- vii) Determine the most effective dose of BAM

The bench scale testing for ISCO, ISEB, and ISCR involved the following tasks:

- Task 1: Initial Characterization of Site soil and groundwater
- Task 2: Chemical Oxidation Microcosm Tests using two oxidants: sodium persulfate with a sodium hydroxide catalyst and PersulOx, a Regenesis proprietary product
- Task 3: Total Oxidant Demand
- Task 4: Metals Leaching Tests
- Task 5: Enhanced Biodegradation and Chemical Reduction Microcosm Tests using emulsified vegetable oil (EVO), Zero-valent iron (ZVI), and emulsified zero-valent iron (EZVI)



Upon receipt, the soil and groundwater samples were analyzed for:

- pH
- VOCs
- Ammonia-nitrogen
- Orthophosphate-phosphorus
- Total anaerobic microbial counts
- Dehalococcoides (DHC) by polymerase chain reaction (PCR)

The analytical results provided a baseline characterization for the treatability study. Analytical results are summarized on Table 7.

4.4.1 Chemical Oxidation Results

A series of batch microcosm tests was conducted using the soil and groundwater samples. The tests assessed chemical oxidation for treatment of soil and groundwater and determined the most effective concentration of the oxidant for treatment.

The soil and groundwater microcosm tests consisted of mixing groundwater with sodium persulfate solution and with PersulfOx, a Regensis proprietary product. The sodium persulfate solutions received sodium hydroxide (NaOH) as a catalyst. PersulfOx contains sodium persulfate premixed with a catalyst.

The groundwater microcosm results showed NaOH catalyzed sodium persulfate was the most effective in treating PCE and its daughter products. In contrast, the PersulfOx results did not fully treat PCE to low concentrations. These data are shown in Tables 8 and 9.

The analytical results showed that soil microcosms that received NaOH catalyzed sodium persulfate and PersulfOx treated PCE to below the analytical detection limit at all concentrations of either product. These data are shown in Tables 10 and 11.

4.4.2 Metals Leaching Results

GHD assessed the potential for metals solubilization due to chemical oxidation treatment. Treatment with NaOH catalyzed sodium persulfate resulted in the solubilization of a small amount of chromium. Treatment with PersulfOx did not result in the solubilization of metals.

4.4.3 Enhanced Biodegradation and Chemical Reduction Results

Microcosms assessed the potential for PCE biodegradation under anaerobic conditions using soil and groundwater collected from the Site.

The following ISEB treatments were performed:

1. Soil and groundwater only (biotic control)
2. Soil, groundwater, emulsified vegetable oil (EVO), nutrients and yeast extract
3. Soil, groundwater, EVO, nutrients, yeast extract and a microbial inoculum



4. Soil, groundwater, EVO, nutrients, yeast extract, a microbial inoculum and sodium azide (abiotic control)

The following treatments were performed for ISCR using proprietary ISCR reagents:

1. Soil, groundwater, EOS ZVI™, nutrients, and yeast extract
2. Soil, groundwater, EHC L™, nutrients, and yeast extract

For ISEB, treatment EVO, yeast extract, and nutrients resulted in the complete dechlorination of PCE to ethene. The addition of a microbial inoculum was not required. Week 12 sample results are shown in Table 12.

For ISCR, treatment with iron containing products resulted in a reduction in the concentration of PCE; however, where PCE was reduced to low levels, the accumulation of C12DCE and/or vinyl chloride was observed. Week 6 results are shown in Table 13.

4.4.4 BAM Results

The groundwater microcosm results showed BAM was effective in treating PCE and its breakdown daughter products in groundwater resulting in > 99.5% reduction. These data are shown in Appendix D.

4.4.5 Bench Scale Testing Conclusions

The ISCO testing results showed that ISCO effectively reduced PCE concentrations and its daughter products in the groundwater and soil. NaOH catalyzed sodium persulfate was more effective than PersulfOx.

The ISEB testing results showed that PCE and its daughter products would degrade under anaerobic conditions. The addition of a microbial inoculum was not required. Whereas, the ISCR testing produced toxic daughter products of C12DCE and vinyl chloride.

The BAM testing results showed effective reduction of PCE and its breakdown daughter products concentrations.

Of these technologies, ISCO appears to be the most promising alternative because it reacts quickly in the environment, destroys PCE, and does not create toxic breakdown daughter products such as VC.

5. Data Evaluation

This section evaluates data collected by GHD and others at the Site and vicinity since 2015. Based on the data, a Conceptual Site Model (CSM) is presented that describes the sources, pathways and receptors. The data shows:

1. That a source of PCE originating from the Site within the upper portion of the aquifer extends to the east-southeast. The PCE migrates eastward towards Eclipse Electric and EPS Printing, which are other known CVOC sources.



2. That one or more separate sources of contamination located upgradient of the Site have contributed or are contributing C12DCE, petroleum hydrocarbons, naphthalene, and other contaminants to the lower portion of the glacial aquifer that is migrating beneath the Site.

5.1 Groundwater Analytical Results Analysis

The collected data show that there is a source area at the Site in or around the former degreaser area no. 2, specifically the area surrounding former degreasers No. 2 and No. 3 (Figure 2). Geologic cross-sections show the highest dissolved PCE concentrations are in the upper portion of the glacial drift aquifer in this area. Two geologic cross-sections illustrate PCE and C12DCE concentrations under the former degreaser area. Figure 15 shows the location of the two cross-sections. Figure 16 (cross-section A-A') shows PCE and C12DCE concentrations parallel to groundwater flow. Figure 17 (cross-section B-B') shows PCE and C12DCE concentrations perpendicular to groundwater flow. These cross-sections clearly show the former degreaser area that contained Degreasers No. 2 and 3 as the PCE source. As would be expected, the cross-sections show that the highest PCE concentrations are in the upper portion of the glacial drift aquifer.

The PCE within the upper portion of the glacial drift aquifer migrates to the east-southeast in a pattern consistent with groundwater flow, as shown on Figure 18. In the vicinity of the Site, PCE is the dominant contaminant within the shallow portion of the glacial drift aquifer. However, PCE experiences some degradation to C12DCE downgradient from the source and migrates into the lower portion of the drift aquifer. Figure 19 shows the shallow C12DCE that degrades from PCE east of the Site.

Figure 20 shows the deep PCE concentrations underneath the study area. Within the lowest portion of the glacial drift aquifer beneath the 6714 Walker Street building, C12DCE is the dominant VOC. Figure 21 also shows elevated (>1,000 µg/L) C12DCE concentrations upgradient from the Site. The source(s) of C12DCE found at these lower locations originate to the west of 6714 Walker Street.

5.2 Conceptual Site Model

The CSM is a written or illustrative understanding of the physical, chemical, and biological processes that affect contaminant transport and migration and the potential impacts to human and ecological receptors. The CSM provides the framework to evaluate site-specific exposure pathways and helps support the remedial decision-making process. This section summarizes the results of the investigative activities conducted at the Site, including the 2016 SI work and work performed by the MPCA. Based on these investigative results, a CSM is presented for the 6714 Walker Street site.

5.2.1 Site Description of Sources, Pathways and Receptors

The investigative results obtained from the SI and SAI programs show a PCE source present in the approximate area where former Degreasers No. 2 and 3 operated. PCE was used as a degreaser. The soil, soil gas and groundwater data collectively confirm the source area. The soil, soil gas and groundwater data collected to date do not appear to show other sources at the Site. However, the source area is approximate.



The PCE release likely occurred at or near the floor surface where former degreasers No.2 and No. 3 (Former Degreaser Area No. 2) were located. The data show that the released PCE migrated downward through the unsaturated soil to the water table aquifer approximately 40 feet bgs. The soil underlying the former degreaser area is predominantly well graded sand with some gravel. GHD did not encounter any significant low permeable silt or clay layers in the former degreaser area that could cause PCE to accumulate or adsorb.

During the downward migration process, a portion of the PCE is attenuated as it adsorbs on the unsaturated soil particles due to surface tension and is entrapped within unsaturated soil pore spaces. Upon reaching the water table, the PCE would need to overcome hydrostatic forces to enter the water table. Once entering the water table, the PCE would continue to attenuate during its downward migration by capillary forces. Based on the data collected under the SAI, PCE appears limited to the upper part of the drift aquifer because the quantity of the PCE release was not meaningful enough to drive it into the lower portion of the glacial drift aquifer. Based on the water quality and soil concentrations, PCE migration extended approximately 20 feet below the water table. Beyond that depth, the PCE concentrations show a significant decrease with depth. There was no direct evidence of free phase PCE found in any sample collected during the investigation. However, it is possible that small droplets of PCE are trapped in the shallow soil pores in the immediate area of the degreaser. This residual PCE in the source area explains the high levels of dissolved PCE found downgradient of the source.

5.2.2 Chemical Mechanisms

Once the PCE entered the subsurface, it impacted the soil and groundwater. Therefore, the following mechanisms have been identified for chemical transport:

- Volatilization of PCE from soil and groundwater into the pore space (soil gas)
- Leaching of PCE from the soil into the groundwater
- Transport of dissolved PCE in groundwater via groundwater flow

Each mechanism is discussed below.

5.2.2.1 Volatilization

Soil gas samples have shown elevated PCE concentrations underneath the building that were addressed through soil vapor extraction, which eliminated a potential vapor intrusion risk. The SVE system was installed and has been operating for over 18 months to remove VOCs and create a vacuum underneath the building to prohibit vapor intrusion. Soil gas results have shown significantly lower PCE by an order of magnitude or more since the SVE system began operating. The rapid and sustained decrease of PCE concentrations in soil gas throughout the Site confirmed that the former degreaser area is the PCE source area. Sub-slab soil gas sampling has occurred at the two adjoining properties and did not show PCE impacts that warrant further investigation or mitigation. This also confirms that the existing SVE system eliminates the off-site vapor intrusion risk.



5.2.2.2 Leaching

PCE in the unsaturated soil has the potential to leach and migrate via infiltration to the glacial drift aquifer. Soil data collected from the former degreaser area provided results with concentrations ranging from 0.86 µg/kg (estimated) to 2,100 µg/kg, with an overall average PCE concentration of 570 µg/kg. The contaminated soil, however, above the water table will not leach to groundwater because the building provides a cap that does not allow infiltration to transport PCE down to the water table. Although the default soil leaching value (SLV) for PCE is 42 µg/kg, a site-specific SLV value will generate a higher value because the soil underlies a building that inhibits infiltration and prevents leaching. In addition, PCE leaching within the unsaturated soil is being mitigated by the existing SVE system that is removing PCE from the subsurface.

5.2.2.3 Groundwater Transport

Groundwater sample results identify PCE emanating from Former Degreaser Area No. 2 and moving towards the east-southeast. This PCE mass occurs primarily in the upper 20-foot (shallow) portion of the water table drift aquifer. The PCE mass attenuates horizontally with distance from the Site. A portion of the PCE biodegrades (i.e., reductive dechlorination) in the anaerobic portion of the aquifer and produces daughter products, such as C12DCE. Figures 22 and 23 show the relative extent of groundwater attributed to 6714 Walker Street for PCE and DCE, respectively, in the shallow groundwater. Figures 22 and 23 show other VOCs located in the area that are traceable to other known VOC sources in the area (e.g., Eclipse Electric).

The PCE mass also attenuates vertically from the 6714 Walker St. property. Figures 24 and 25 show the lower (deep) portion of the water table drift aquifer and the underlying Platteville Aquifer for PCE and DCE, respectively. Figure 24 shows a much smaller PCE mass in the deep water table aquifer associated with 6714 Walker St, whereas, Figure 25 clearly shows that DCE is present in the upgradient and downgradient of 6714 Walker Street.

Separate and apart from the PCE, other compounds are present unrelated to 6714 Walker Street such as C12DCE, Naphthalene, petroleum hydrocarbons (PHC) and VC. These compounds are present in the drift aquifer and the underlying Platteville Limestone aquifer. The C12DCE, Naphthalene, and VC originates at source(s) upgradient of 6714 Walker. To date, the MPCA has not defined the source of the upgradient C12DCE plume.

5.2.3 Receptors

No receptors are currently impacted by the PCE contamination.

The potential receptors and exposure routes are:

- Inhalation of PCE volatilized from soil gas (incomplete pathway)
- Ingestion of groundwater as drinking water (incomplete pathway),
- Incidental ingestion and dermal contact of soil particulates (incomplete pathway)

The inhalation exposure is addressed by the SVE system that is mitigating PCE vapors from underneath the building.



There is no ingestion exposure because the receptors are on municipal water.

Because the PCE source is underneath the building, the likelihood of contact or ingestion is low unless under unique circumstances (e.g., construction worker).

5.3 Off-Site Contributing Contaminant Sources

The groundwater quality underneath the Site is impacted by upgradient CVOC contaminant source(s) in the area. The upgradient CVOC sources show substantial concentrations (>1,000 µg/L) for C12DCE and elevated levels (> 100 µg/L) for vinyl chloride. These significant contamination levels are not attributed to on-Site sources.

In addition, MPCA identified other sources that are downgradient of the Site. Numerous reports, such as AECOM (2009⁸), and the MPCA (2017⁹), document some of these CVOC sources. At the Site, upgradient CVOCs migrate in the deep glacial drift aquifer and the underlying Platteville Limestone.

Sources unrelated to 6714 Walker Street are illustrated by a generalized geologic cross section (C-C') that is located on Figure 26. Figure 27 shows a generalized 900-foot long geologic cross-section along Walker Street that passes south of the former degreaser area inside the 6714 Walker Street building. Figure 27 shows substantial total (cis and trans) 1,2-dichloroethene (DCE) concentrations migrating from the west and passing under the Site, whereas the PCE from 6714 Walker Street is found in the upper portion of the glacial drift aquifer. The source(s) of the upgradient CVOCs is not confirmed but it extends westward as far as the Reilly Tar Superfund site, where several monitoring wells have detected CVOCs (AECOM, 2013¹⁰). The Reilly Tar site is a known source of CVOCs but has not yet been added to MPCA's list of potential CVOC sources. These upgradient sources must be considered when proceeding with the development of Remedial Action Objectives for the Site.

5.4 Remediation Objectives

Remediation objectives (ROs) provide a general description of what the remediation intends to accomplish. By defining these ROs, this will help in determining what remediation alternatives should be evaluated. For this Site, the following ROs are identified.

RO 1 – Reduce VOCs in the unsaturated soil in the source area to prevent future vapor intrusion issue.

RO 2 – Extract VOCs in soil gas to protect building occupants.

RO 3 – Reduce VOC concentrations in the upper portion of the glacial drift aquifer (i.e. shallow groundwater) beneath the suspected source area insofar as practicable.

⁸ AECOM. 2009. Potential Sources of Chlorinated VOCs Investigation – Twelve Sites in St. Louis Park, dated June 30, 2009

⁹ MPCA. 2017. Site Inspection Report, St. Louis Park Solvent Plume Site, dated February 17, 2017.

¹⁰ AECOM. 2013. VOC Sampling of the Edina and St. Louis Park Wells in FY2013, dated June 30, 2013.



RO 4 – Establish site-specific cleanup goals for shallow groundwater, given existing upgradient groundwater contamination impacts.

6. Evaluation of Remediation Alternatives

GHD prepared an Evaluation of Remediation Alternatives (ERA) Report to address elevated concentrations of PCE in shallow groundwater beneath the Site. The ERA Report is provided in Appendix E.

The following alternatives are well demonstrated for remediation of VOC contamination in groundwater and are included in this ERA Report:

- Alternative 1 – Air Sparging (AS)
- Alternative 2 – ISCO
- Alternative 3 – BAM
- Alternative 4 – Electrical Resistance Heating (ERH)

Based on the conclusions of the ERA Report, Alternative 2 (ISCO) offers the most balanced approach for achieving the Site-specific ROs established for groundwater.

The significant advantages of implementing ISCO at the Site include:

- Complete destruction of PCE without creating toxic byproducts.
- Proven effectiveness based on successful bench-testing results.
- Minimal, short-term disruption to property owner.
- No permanent infrastructure
- No O&M
- Shortest remediation timeframe (2 years)
- Relatively low cost of implementation.

To further support the technical and economic feasibility of achieving the ROs established for groundwater, GHD recommends design and implementation of an ISCO pilot test in the suspected source area. The pilot test will provide verification of the major design assumptions (radius of influence, oxidant dosage, etc.) needed to demonstrate the implementability and effectiveness of ISCO in reducing PCE concentrations at the Site.

7. Summary and Recommendations

The comprehensive SI and SAI investigative activities delineated the nature and extent of CVOCs at the Site in the soil, soil gas, and groundwater attributed to historic operations. Samples were collected from all three media (soil, air, groundwater) both horizontally and vertically across the Site. These SI and SAI samples results for soil, vapor and groundwater are consistent with the CSM. The



data primarily indicates that the area surrounding the second former degreaser area is the PCE source area at the Site. The data does not indicate existence of other source areas at the Site.

The PCE released likely occurred at or near the surface when former degreasing area no. 2 was in use and infiltrated into the subsurface. The details of the apparent PCE release are not certain. The released PCE infiltrated downward into the glacial drift (i.e., water table) aquifer. Once in the subsurface, the PCE dissipated into both soil (vapor) and groundwater. A SVE system was installed to capture PCE underneath the building and protect the occupants from vapor intrusion issues. The SVE system has been effective to removing VOCs from the unsaturated soil and reducing PCE soil gas concentrations underneath the entire building.

Although the SAI found no direct evidence of free phase product or DNAPL, the high PCE concentrations suggest that residual PCE, or ganglia, may be present in the subsurface. The highest PCE concentrations in groundwater occur in the upper portion of the glacial drift aquifer and are dissipating or migrating to the east-southeast. The PCE concentrations diminish rapidly with depth and show that the PCE from the Site is limited to the upper portion of the drift aquifer.

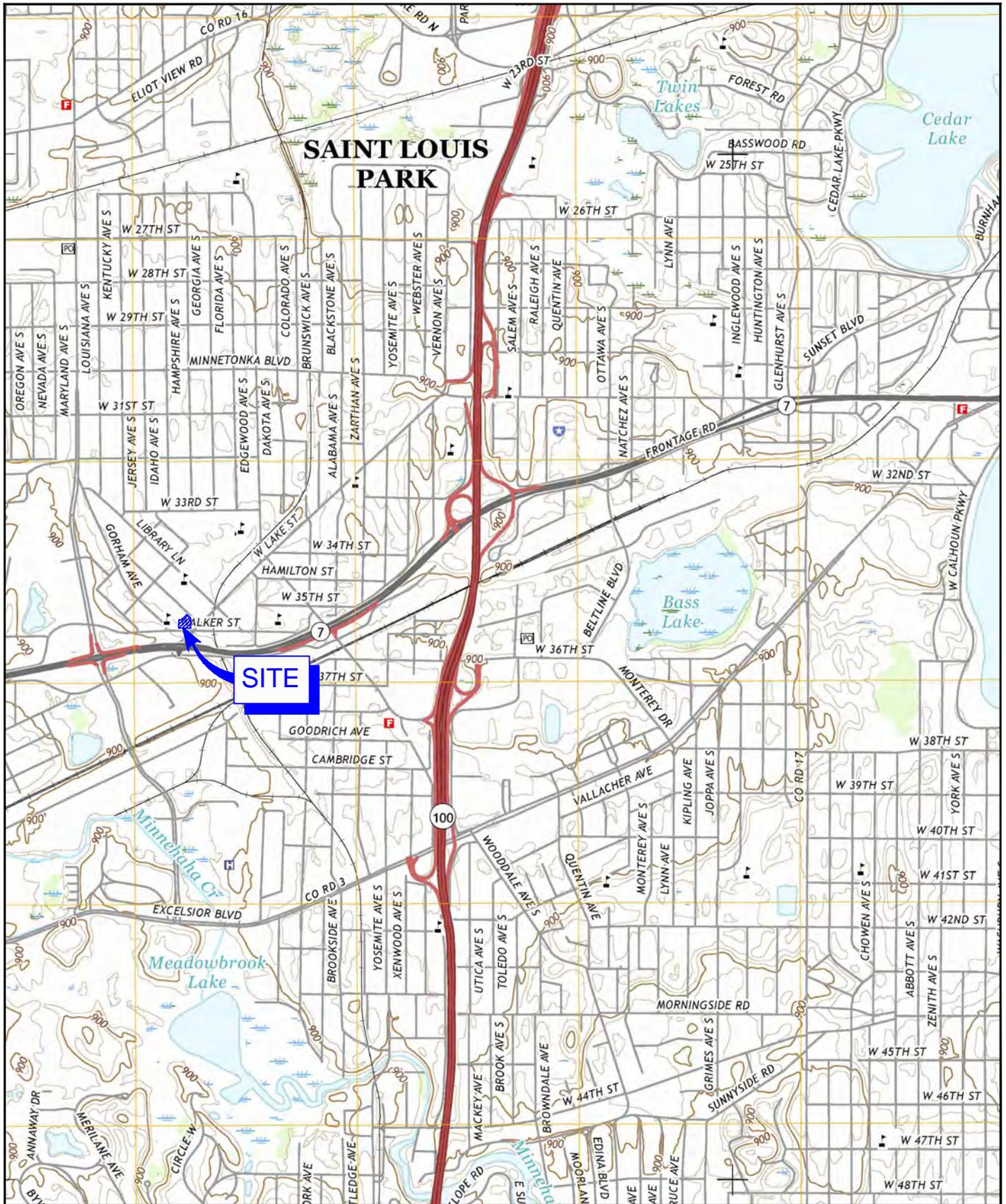
A significant observation from this investigation is that there is a deep CVOC plume migrating onto the Site from the west. This deeper plume is primarily C12DCE and occurs in the lower portions of the glacial drift aquifer and underlying Platteville Limestone aquifer. This deep CVOC plume can be traced upgradient to the west towards the Reilly Tar Superfund Site area but has not been fully characterized and properly investigated. Based on review of the historical Reilly Tar Superfund waste handling and disposal practices, which included both large scale surface dumping and direct injection of waste product into multiple deep aquifers, the former Reilly Tar Superfund Site appears to be a significant upgradient source of multi-aquifer CVOC contamination.

As part of the SAI, GHD conducted bench scale testing on representative soil and groundwater samples to evaluate potential treatment options for soil and groundwater contamination by PCE, which included chemical oxidation, enhanced biodegradation and chemical reduction. The bench scale testing showed that ISCO, ISEB, and BAM effectively treat PCEs at the Site.

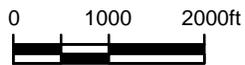
GHD prepared an ERA Report to address elevated concentrations of CVOCs in shallow groundwater beneath the Site. Based on the conclusions of the ERA Report, Alternative 2 (ISCO) offers the most balanced approach for achieving the Site-specific ROs established for groundwater.

To further support the technical and economic feasibility of achieving the ROs established for groundwater, GHD recommends design and implementation of an ISCO pilot test in the suspected source area. The pilot test will provide verification of the major design assumptions (e.g. radius of influence, oxidant dosage, etc.) needed to demonstrate the implementability and effectiveness of ISCO in reducing PCE concentrations at the Site.

Figures



Source: USGS QUADRANGLE MAP: MINNEAPOLIS SOUTH, MN. (2016).

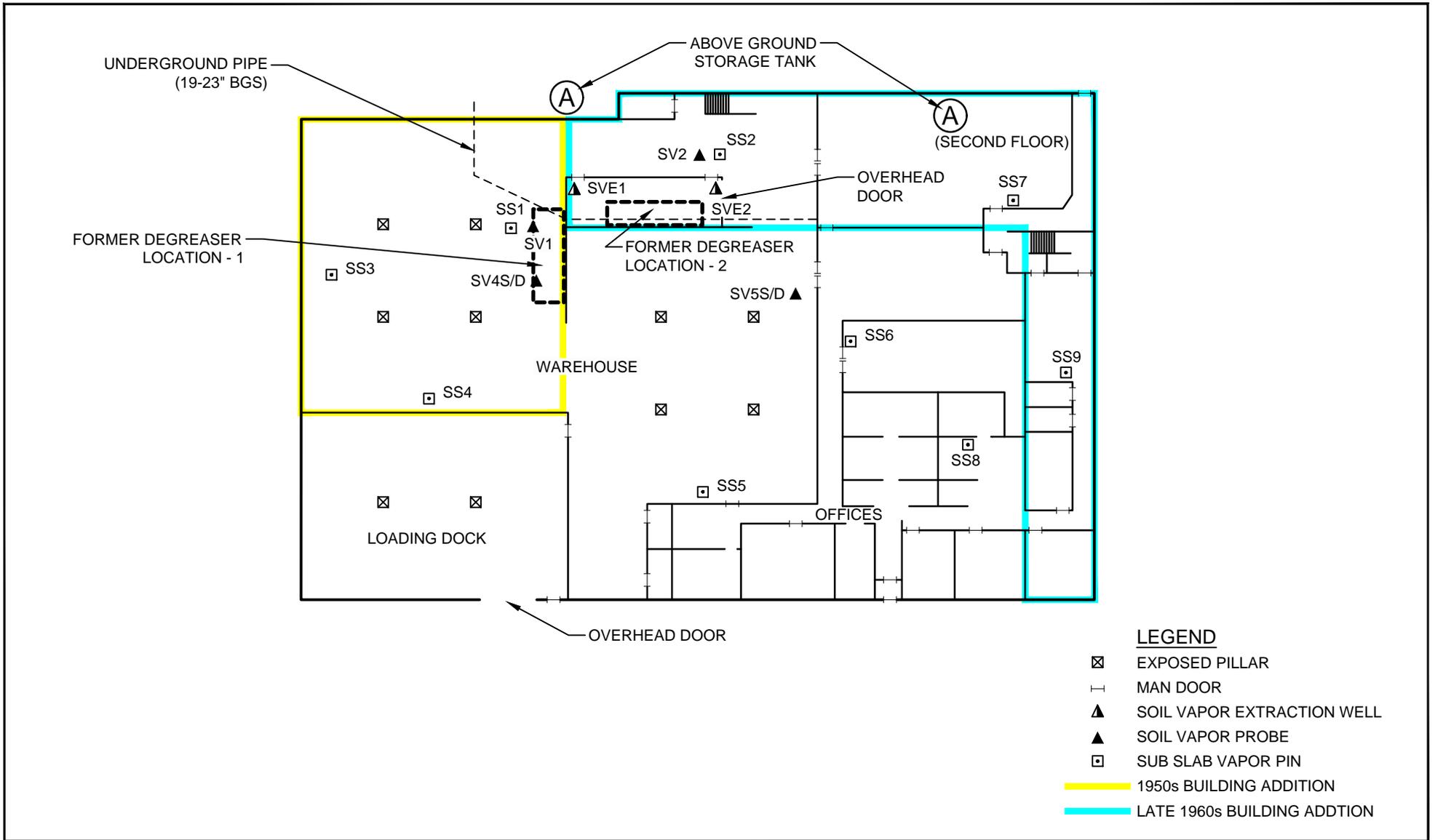


6714 WALKER STREET
ST. LOUIS PARK, MINNESOTA

88751-40
Dec 6, 2017

SITE LOCATION

FIGURE 1



6714 WALKER STREET
ST. LOUIS PARK, MINNESOTA

VAPOR EXTRACTION AND
MONITORING LOCATIONS

88751-40
Dec 6, 2017

FIGURE 2



Source: ESRI Basemap Imagery, 2016; Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

LEGEND

-  VAP Geoprobe
-  MW1A / MW1B
-  Existing Drift Well
-  Existing Platteville Well
-  Property Line

figure 3
MONITORING LOCATIONS
6714 WALKER STREET
St. Louis Park, MN



MW-1A				
DATE	PCE	TCE	C12DCE	VC
FEB	45,000	<5000	<5000	<5000
MAR	28,000	<1000	<1000	<1000
MAR Duplicate	24,000	<1300	<1300	<1300

MW-1B				
DATE	PCE	TCE	C12DCE	VC
FEB	10 J	<13	350	140
FEB Duplicate	9.5 J	<20	330	130
MAR	<25	<25	620	120

P307				
DATE	PCE	TCE	C12DCE	VC
FEB	<170	<170	4500	270
MAR	<200	<200	4800	370

W437				
DATE	PCE	TCE	C12DCE	VC
FEB	<50	<50	940	82
MAR	36 J	<40	1300	110

P309				
DATE	PCE	TCE	C12DCE	VC
FEB	68 J	100 J	3900	310
MAR	R	R	4500 J	280 J

P310				
DATE	PCE	TCE	C12DCE	VC
FEB	37 J	<63	1500	23 J
MAR	R	R	1700 J	24 J

Source: ESRI Basemap Imagery, 2016; Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

LEGEND

Nested Well Existing Platteville Well Existing Drift Well Property Line

J - Estimated concentration
 R- Rejected non-detect data; preservation issues
 PCE - Tetrachloroethylene
 TCE - Trichloroethylene
 C12DCE - Cis - 1,2 - Dichloroethene
 VC - Vinyl Chloride

figure 4
 2016 MONITORING WELL SAMPLING RESULTS
 6714 WALKER STREET
 St. Louis Park, MN



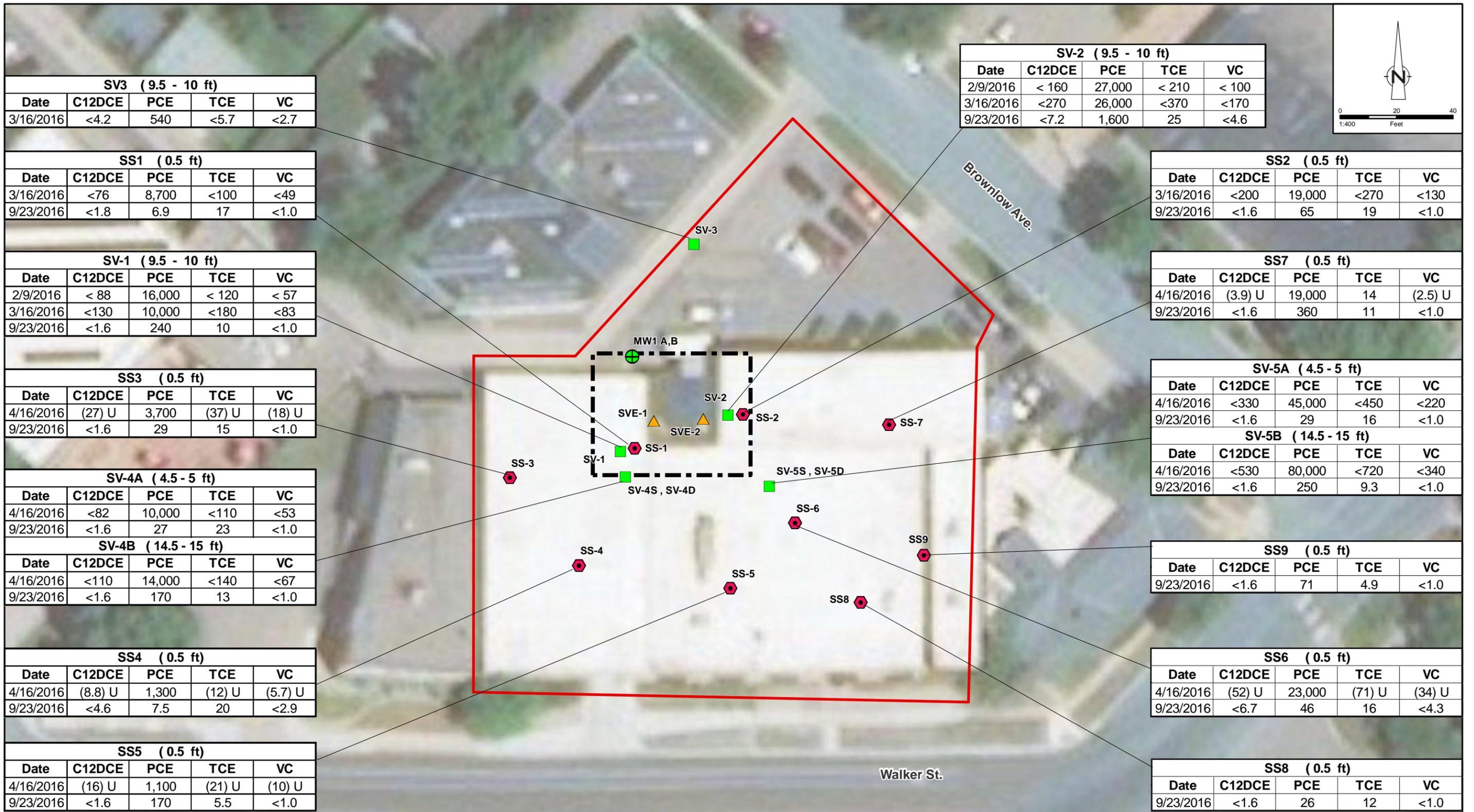
Source: ESRI Basemap Imagery, 2016; Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

LEGEND

-  Geoprobe (µg/L)
-  Nested Well
-  Existing Drift Well
-  Existing Platteville Well
-  Property Line

All Units in Micrograms per liter (µg/L)
 () - Duplicate Sample
PCE - Tetrachloroethylene
TCE - Trichloroethylene
C12DCE - Cis - 1,2 - Dichloroethene
VC - Vinyl Chloride

figure 5
 2016 VAP SAMPLING RESULTS
 6714 WALKER STREET
 St. Louis Park, MN



SV3 (9.5 - 10 ft)				
Date	C12DCE	PCE	TCE	VC
3/16/2016	<4.2	540	<5.7	<2.7

SV-2 (9.5 - 10 ft)				
Date	C12DCE	PCE	TCE	VC
2/9/2016	< 160	27,000	< 210	< 100
3/16/2016	<270	26,000	<370	<170
9/23/2016	<7.2	1,600	25	<4.6

SS1 (0.5 ft)				
Date	C12DCE	PCE	TCE	VC
3/16/2016	<76	8,700	<100	<49
9/23/2016	<1.8	6.9	17	<1.0

SS2 (0.5 ft)				
Date	C12DCE	PCE	TCE	VC
3/16/2016	<200	19,000	<270	<130
9/23/2016	<1.6	65	19	<1.0

SV-1 (9.5 - 10 ft)				
Date	C12DCE	PCE	TCE	VC
2/9/2016	< 88	16,000	< 120	< 57
3/16/2016	<130	10,000	<180	<83
9/23/2016	<1.6	240	10	<1.0

SS7 (0.5 ft)				
Date	C12DCE	PCE	TCE	VC
4/16/2016	(3.9) U	19,000	14	(2.5) U
9/23/2016	<1.6	360	11	<1.0

SS3 (0.5 ft)				
Date	C12DCE	PCE	TCE	VC
4/16/2016	(27) U	3,700	(37) U	(18) U
9/23/2016	<1.6	29	15	<1.0

SV-5A (4.5 - 5 ft)				
Date	C12DCE	PCE	TCE	VC
4/16/2016	<330	45,000	<450	<220
9/23/2016	<1.6	29	16	<1.0

SV-4A (4.5 - 5 ft)				
Date	C12DCE	PCE	TCE	VC
4/16/2016	<82	10,000	<110	<53
9/23/2016	<1.6	27	23	<1.0

SV-5B (14.5 - 15 ft)				
Date	C12DCE	PCE	TCE	VC
4/16/2016	<530	80,000	<720	<340
9/23/2016	<1.6	250	9.3	<1.0

SV-4B (14.5 - 15 ft)				
Date	C12DCE	PCE	TCE	VC
4/16/2016	<110	14,000	<140	<67
9/23/2016	<1.6	170	13	<1.0

SS9 (0.5 ft)				
Date	C12DCE	PCE	TCE	VC
9/23/2016	<1.6	71	4.9	<1.0

SS4 (0.5 ft)				
Date	C12DCE	PCE	TCE	VC
4/16/2016	(8.8) U	1,300	(12) U	(5.7) U
9/23/2016	<4.6	7.5	20	<2.9

SS6 (0.5 ft)				
Date	C12DCE	PCE	TCE	VC
4/16/2016	(52) U	23,000	(71) U	(34) U
9/23/2016	<6.7	46	16	<4.3

SS5 (0.5 ft)				
Date	C12DCE	PCE	TCE	VC
4/16/2016	(16) U	1,100	(21) U	(10) U
9/23/2016	<1.6	170	5.5	<1.0

SS8 (0.5 ft)				
Date	C12DCE	PCE	TCE	VC
9/23/2016	<1.6	26	12	<1.0

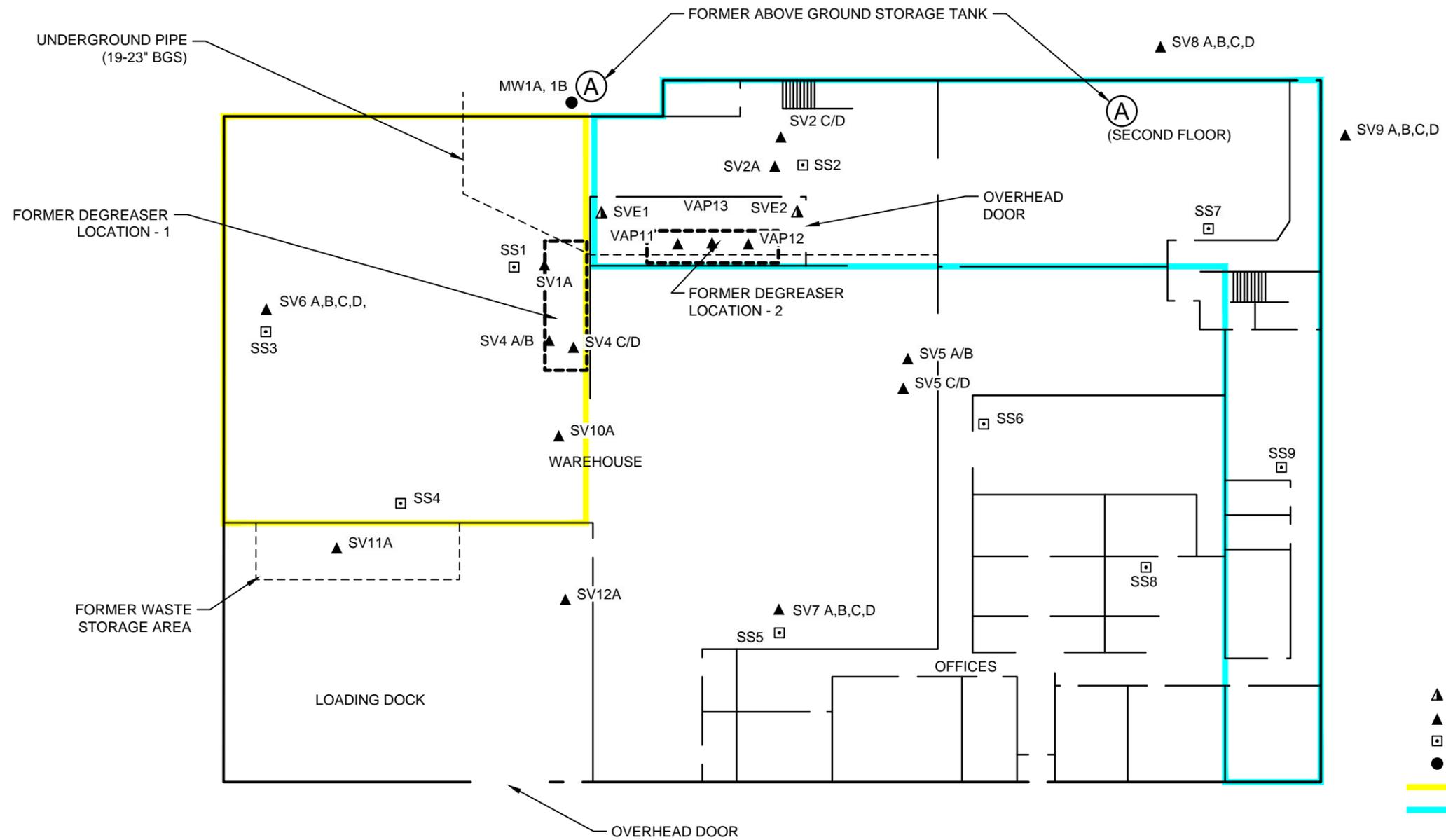
Source: ESRI Basemap Imagery, 2016; Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

LEGEND

- Soil Vapor Extraction Well
- Vapor Probe (µg/m3)
- Sub Slab (µg/m3)
- Nested Well
- Suspected Source Area
- Property Line

PCE - Tetrachloroethylene
TCE - Trichloroethylene
C12DCE - Cis - 1,2 - Dichloroethene
VC - Vinyl Chloride

figure 6
SOIL GAS SAMPLING RESULTS
6714 WALKER STREET
St. Louis Park, MN

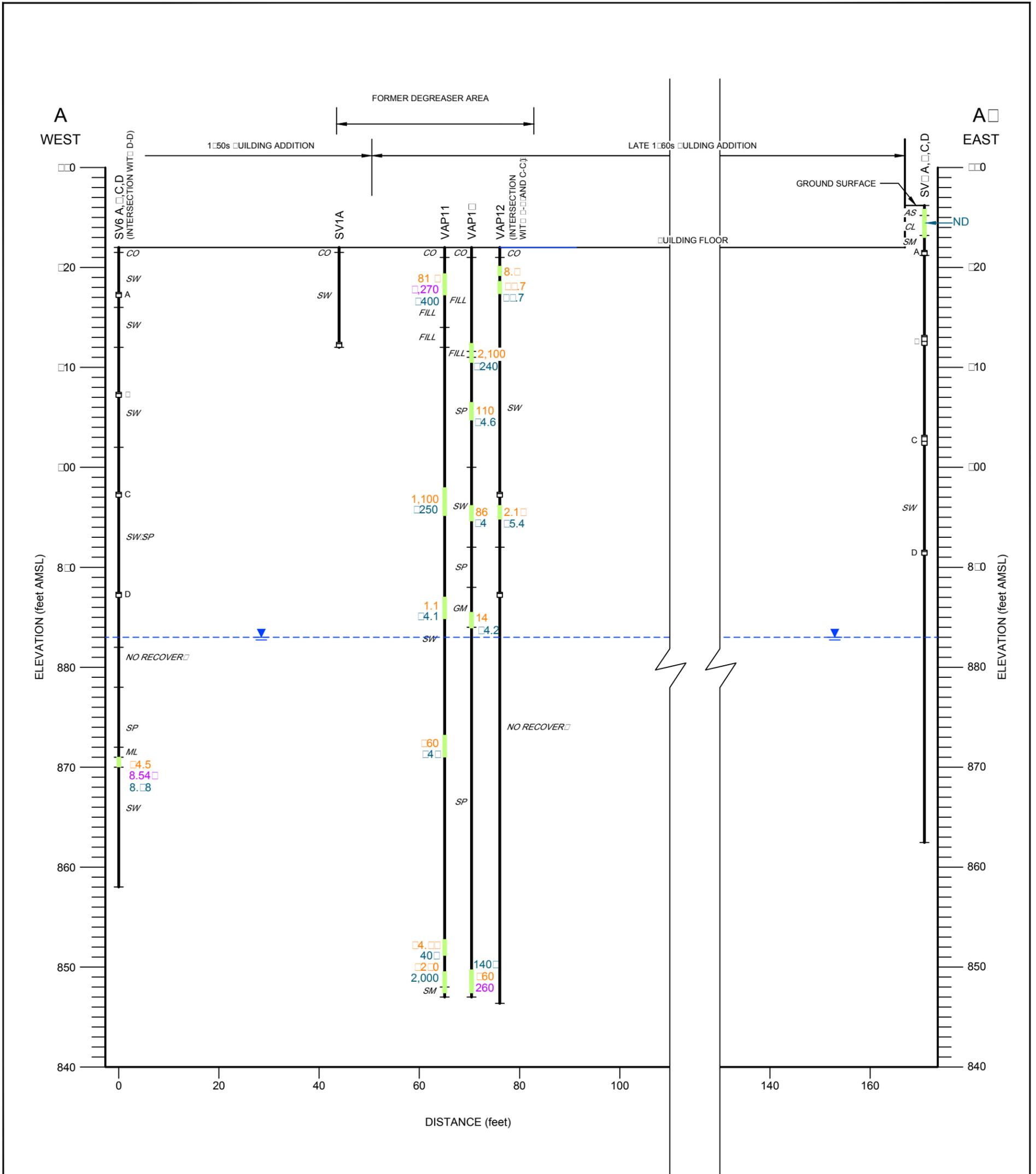


6714 WALKER STREET
ST. LOUIS PARK, MINNESOTA

SOIL GAS MONITORING LOCATIONS

88751-40
Dec 6, 2017

FIGURE 7



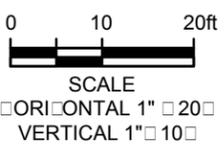
LEGEND

- SV1A — WELL DESIGNATION
- GROUND SURFACE
- OBSERVATION WELL INSTALLATION
- STATIC WATER LEVEL (feet AMSL) (MARC 24, 2016)
- STRATIGRAPHIC BOUNDARY
- SW — TYPICAL SOIL CLASSIFICATION
- SOIL GAS PROBE
- SCREENED INTERVAL
- BOTTOM OF BORING
- AS - ASPHALT
- CO - CONCRETE

- FILL - PEA GRAVEL
- SM - SILT SANDS, SAND-SILT MIXTURES
- SW - WELL-GRADED SAND, GRAVEL SANDS, LITTLE OR NO FINES
- GM - SILT GRAVELS, GRAVEL-SAND-SILT MIXTURES
- SW:SP - MEDIUM GRAINED, TRACE TO WIT GRAVEL
- SP - POORLY-GRADED SANDS, GRAVEL SANDS, LITTLE OR NO FINES
- CL - CLAY
- ML - SILT

PARAMETER RESULTS (g/g)

TETRACHLOROETHYLENE (PCE)	26
CIS-1,2-DICHLOROETHYLENE (C12DCE)	2,000
BENZENE, TOLUENE, ETHYL BENZENE, AND XYLENES (TEX)	260
	ESTIMATED VALUE

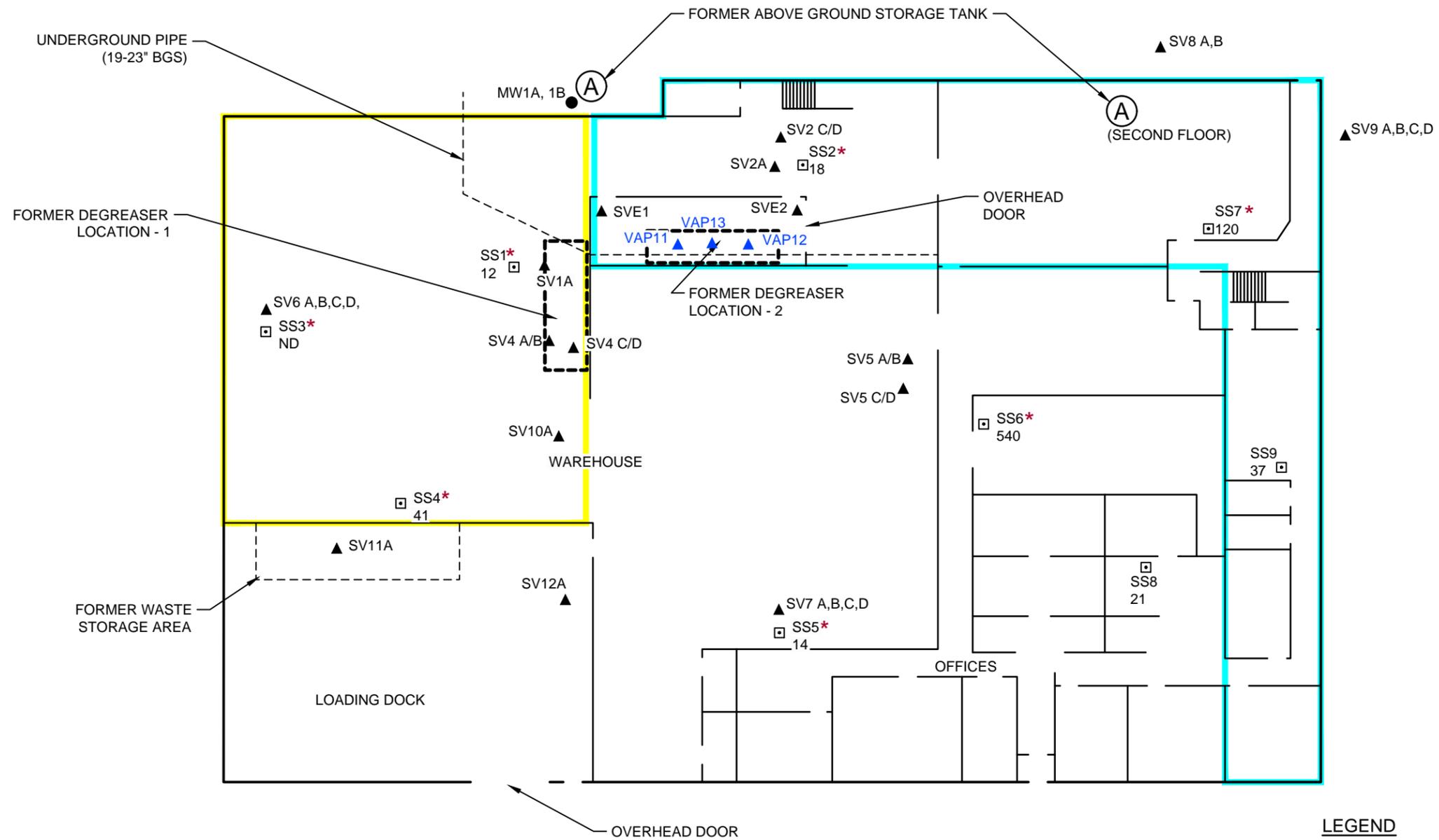


6714 WALKER STREET
ST. LOUIS PARK, MINNESOTA

SOIL SAMPLING RESULTS

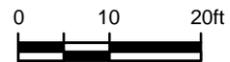
88751-40
Dec 11, 2017

FIGURE 8



- LEGEND**
- ▲ VAP AND DEEP SOIL GAS PROBE
 - ▲ SOIL VAPOR PROBE
 - ▣ SUB SLAB VAPOR PIN
 - MONITORING WELL LOCATION
 - 1950s BUILDING ADDITION
 - LATE 1960s BUILDING ADDITION

- NOTES:**
1. PCE INDUSTRIAL (33xISV) CRITERIA IS 1,100 $\mu\text{g}/\text{m}^3$.
 2. * PREVIOUSLY EXCEEDED ISV
 3. ALL VALUES IN $\mu\text{g}/\text{m}^3$

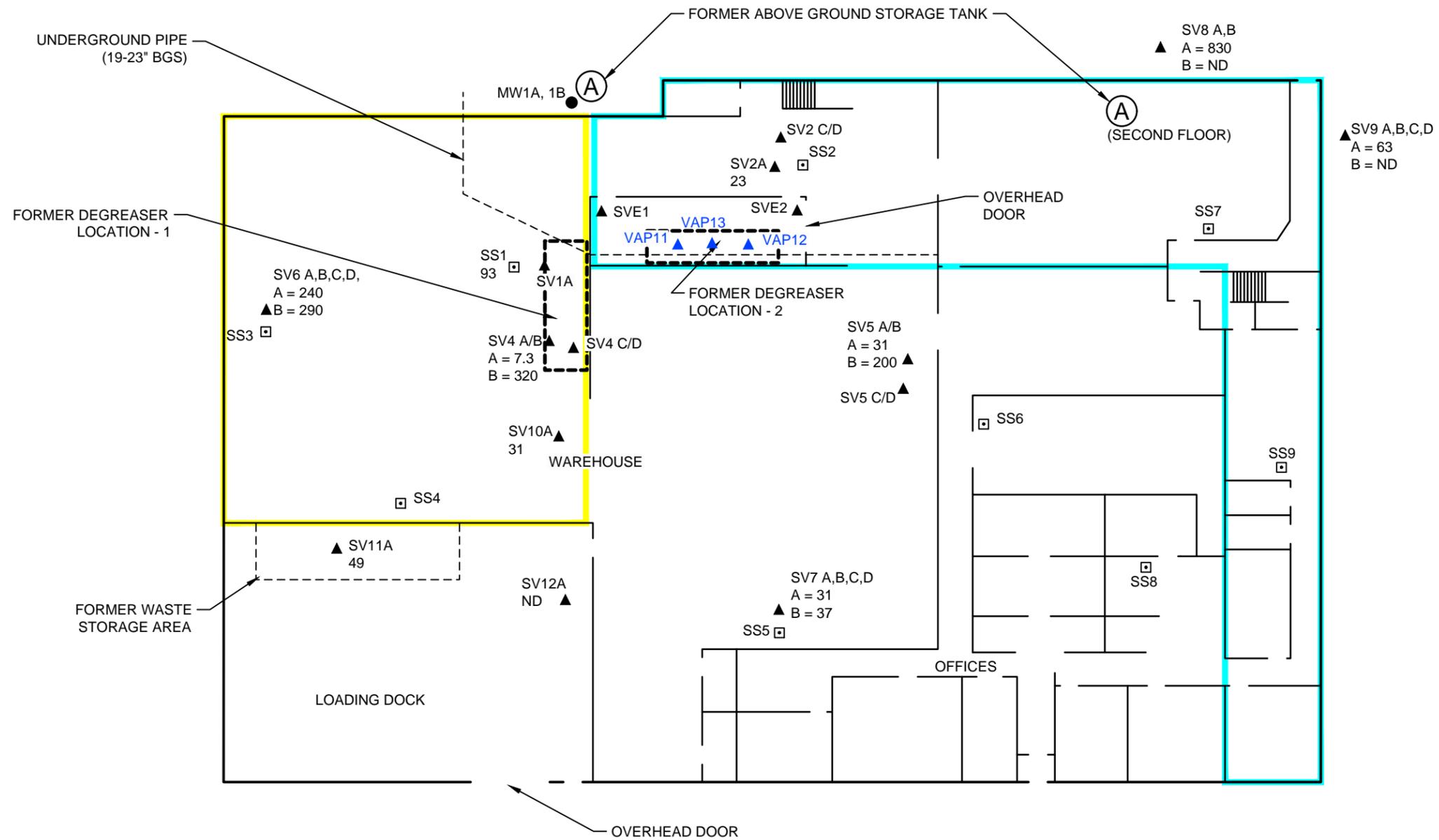


6714 WALKER STREET
ST. LOUIS PARK, MINNESOTA

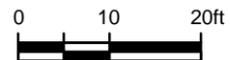
88751-40
Dec 13, 2017

2017 SUBSLAB SAMPLE RESULTS

FIGURE 9



- LEGEND**
- ▲ VAP AND DEEP SOIL GAS PROBE
 - ▲ SOIL VAPOR PROBE
 - SUB SLAB VAPOR PIN
 - MONITORING WELL LOCATION
 - 1950s BUILDING ADDITION
 - LATE 1960s BUILDING ADDITION
 - A = 5 FT. BGS
 - B = 15 FT. BGS
- ALL VALUES IN $\mu\text{g}/\text{m}^3$



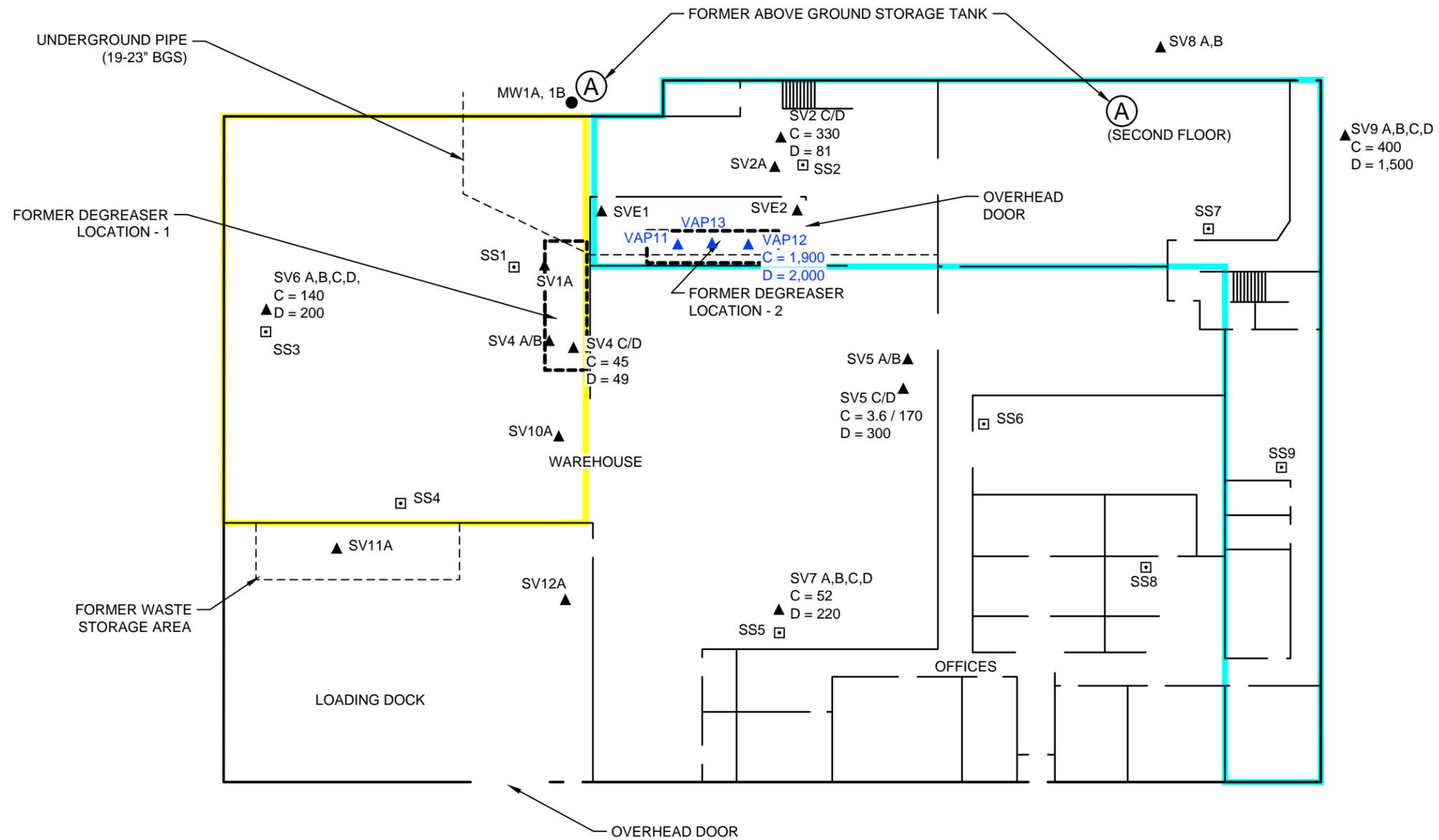
6714 WALKER STREET
ST. LOUIS PARK, MINNESOTA

88751-40

Dec 13, 2017

2017 SHALLOW PCE SOIL GAS RESULTS

FIGURE 10



- LEGEND**
- ▲ VAP AND DEEP SOIL GAS PROBE
 - ▲ SOIL VAPOR PROBE
 - SUB SLAB VAPOR PIN
 - MONITORING WELL LOCATION
 - 1950s BUILDING ADDITION
 - LATE 1960s BUILDING ADDITION
 - C = 25 FT. BGS
 - D = 35 FT. BGS
 - ALL VALUES IN $\mu\text{g}/\text{m}^3$



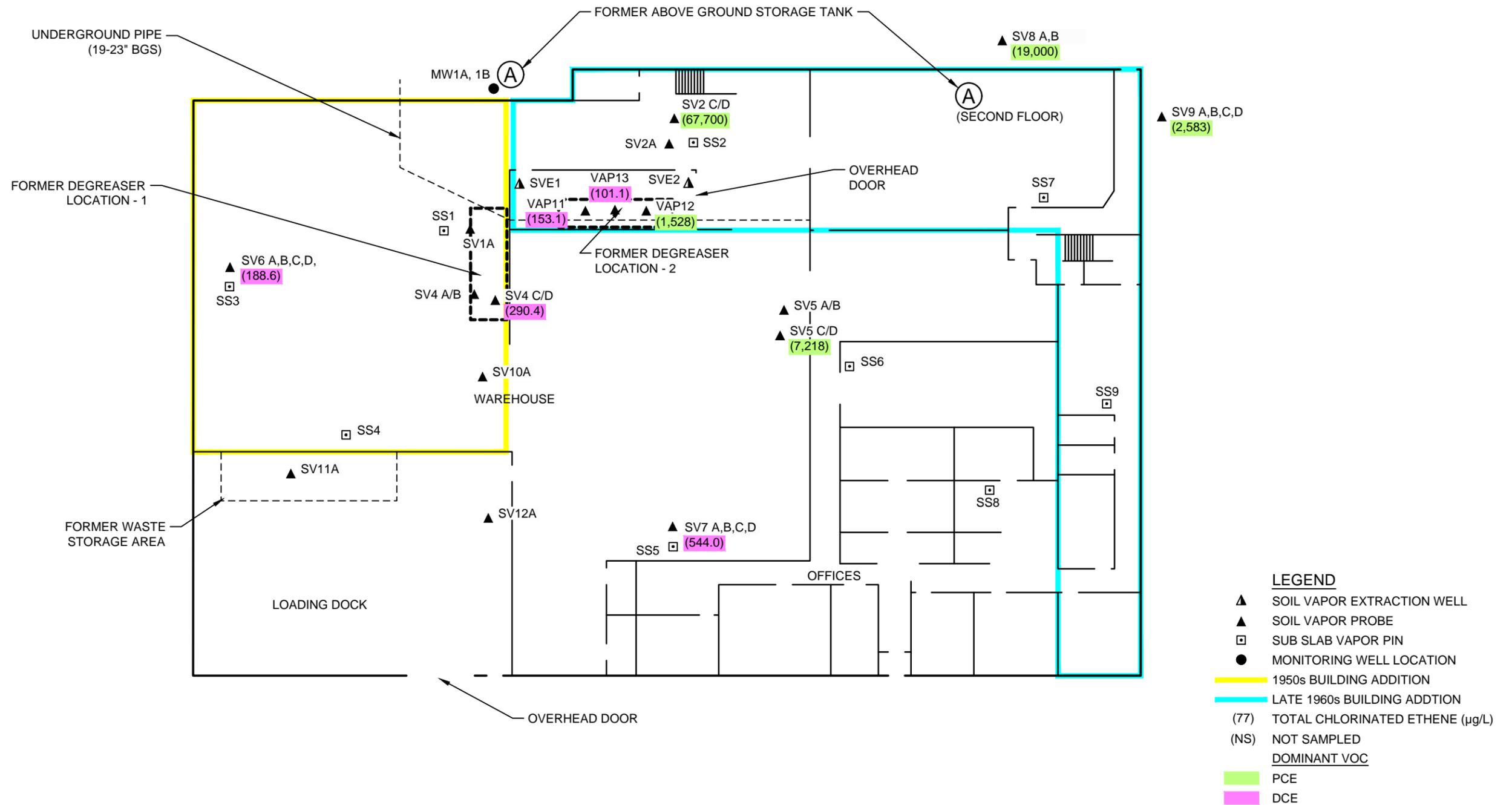
6714 WALKER STREET
ST. LOUIS PARK, MINNESOTA

88751-40

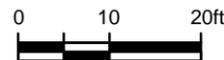
Dec 13, 2017

2017 DEEP PCE SOIL GAS RESULTS

FIGURE 11



NOTE:
 TOTAL CHLORINATED ETHENES: TETRACHLOROETHENE (PCE);
 TRICHLOROETHENE (TCE); 1,2-DICHLOROETHENE (DCE);
 VINYL CHLORIDE (VC)

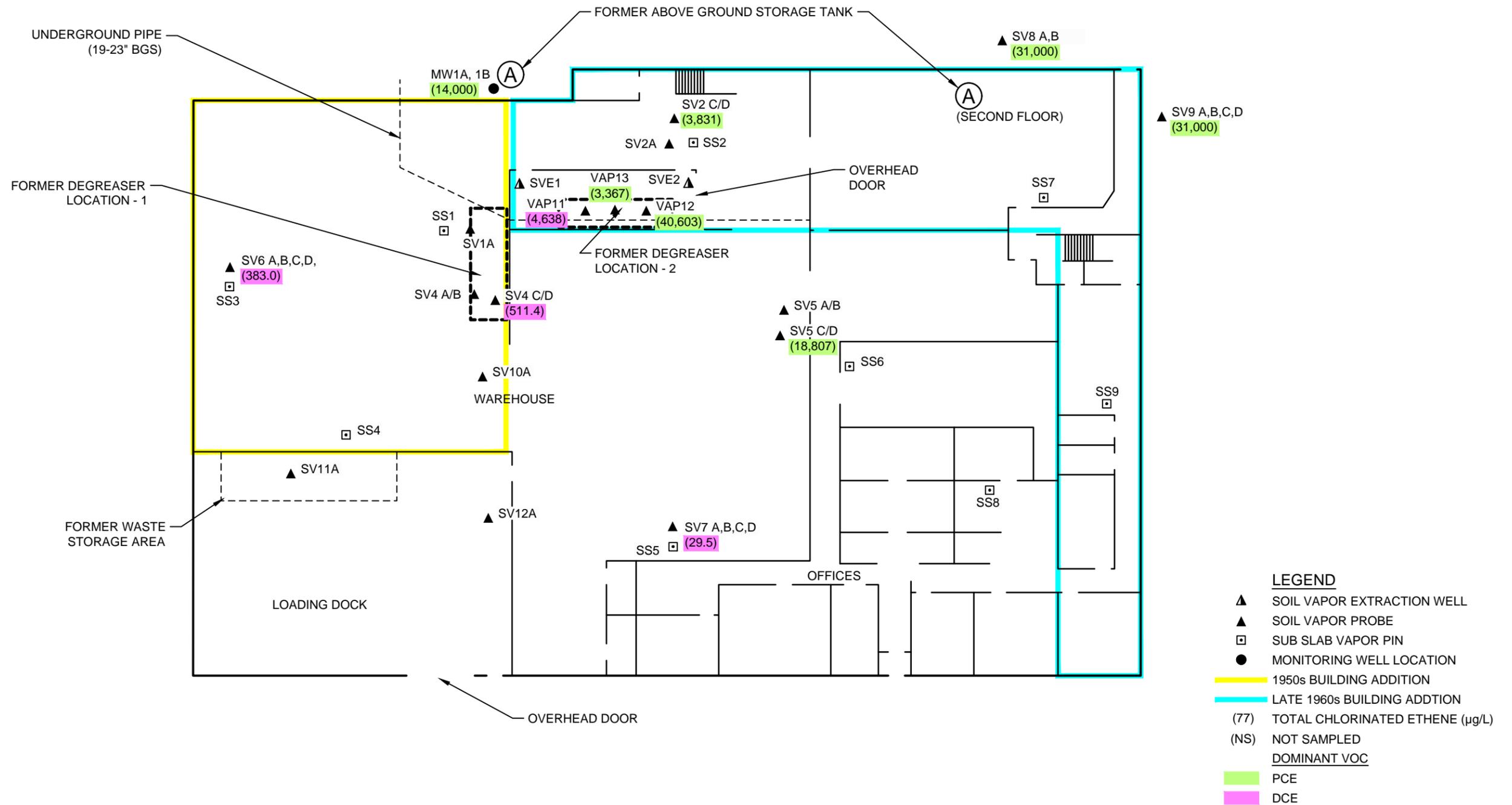


6714 WALKER STREET
 ST. LOUIS PARK, MINNESOTA

TOTAL CHLORINATED ETHENES
 40-50 FT BGS (~882-872 FT AMSL)

88751-40
 Dec 6, 2017

FIGURE 12

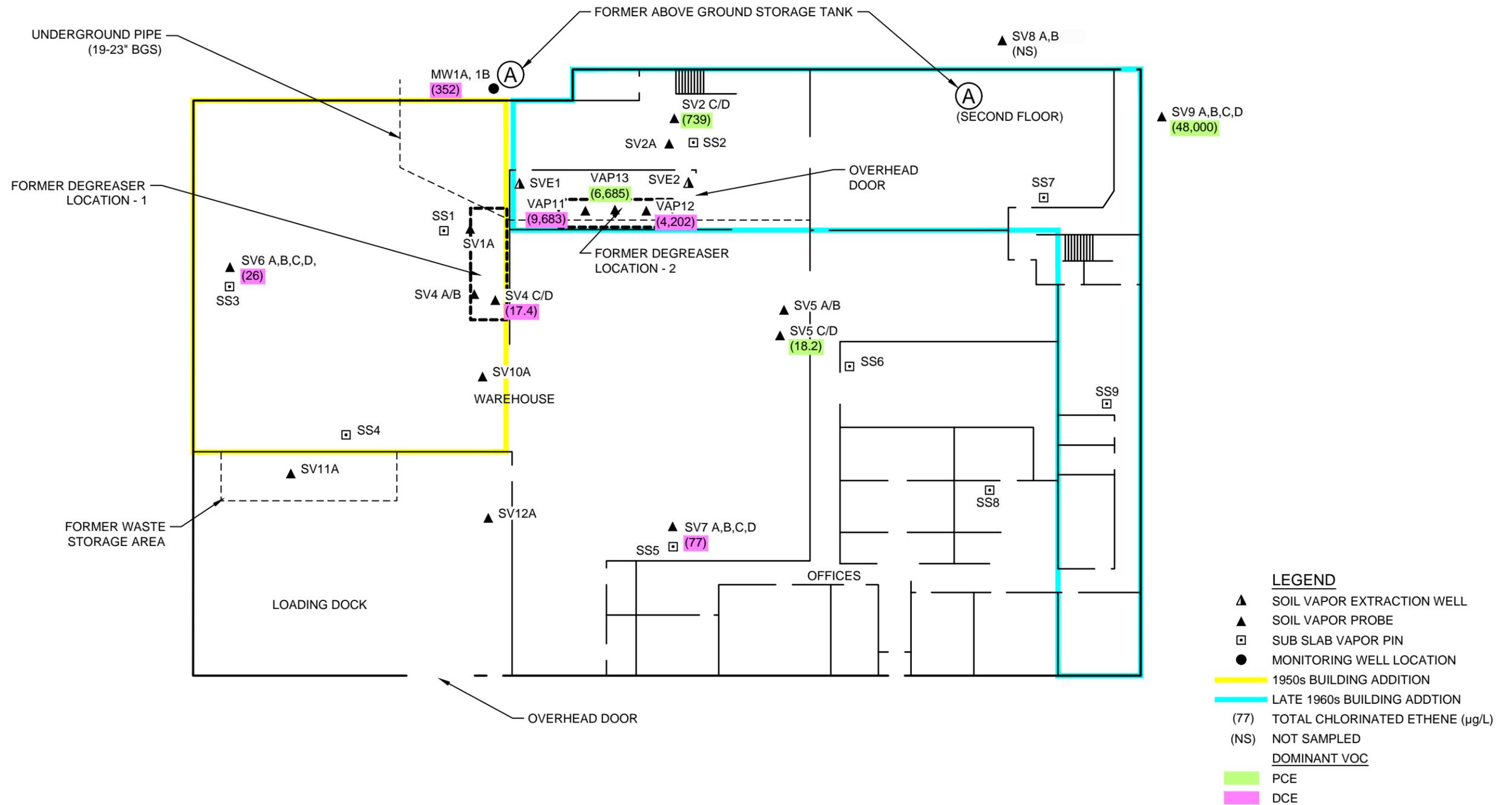


6714 WALKER STREET
 ST. LOUIS PARK, MINNESOTA

TOTAL CHLORINATED ETHENES
 50-60 FT BGS (~872-862 FT AMSL)

88751-40
 Dec 6, 2017

FIGURE 13



NOTE:
 TOTAL CHLORINATED ETHENES: TETRACHLOROETHENE (PCE);
 TRICHLOROETHENE (TCE); 1,2-DICHLOROETHENE (DCE);
 VINYL CHLORIDE (VC)

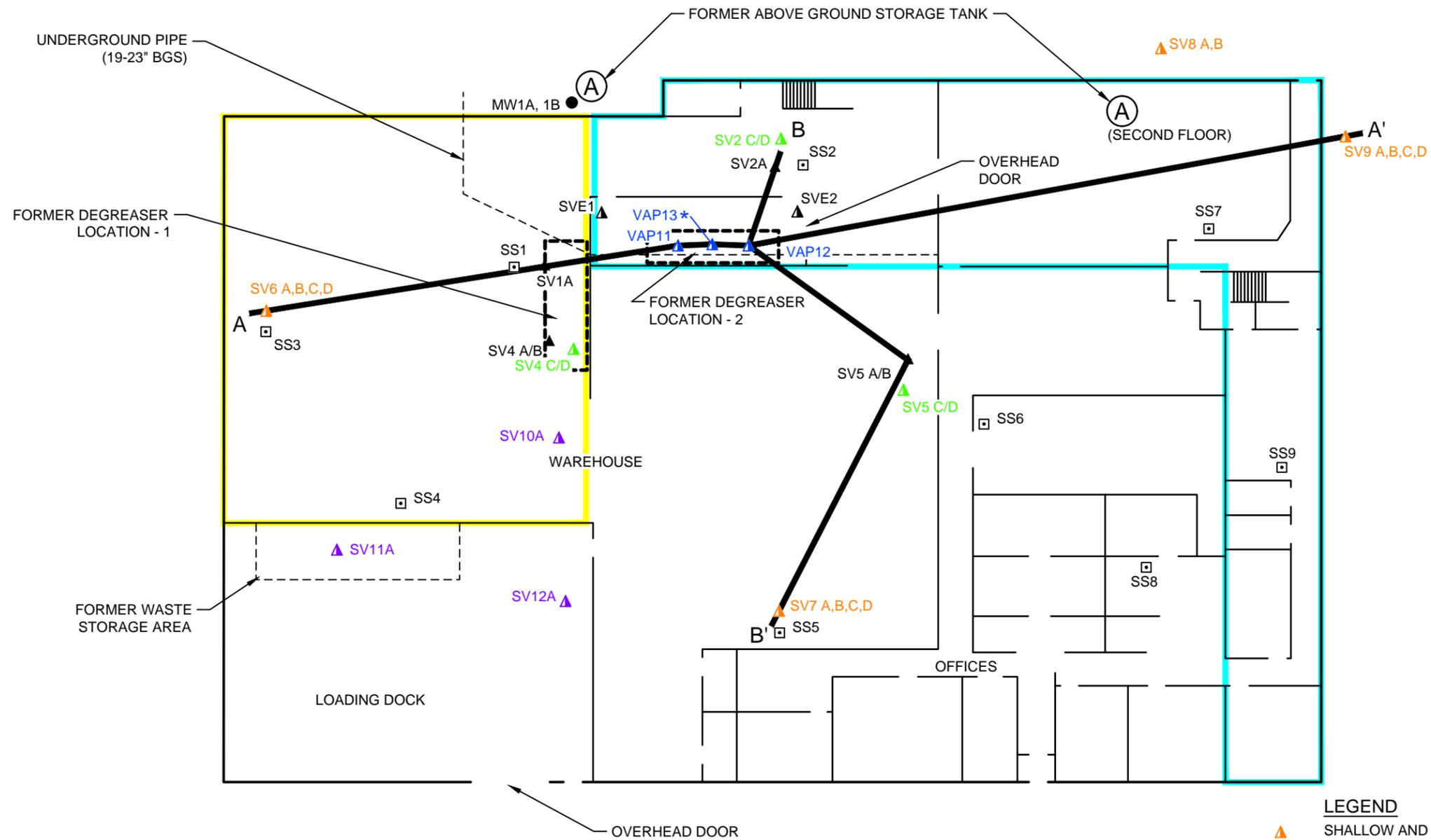


6714 WALKER STREET
 ST. LOUIS PARK, MINNESOTA

TOTAL CHLORINATED ETHENES
 60-75 FT BGS (~862-847 FT AMSL)

88751-40
 Dec 6, 2017

FIGURE 14



- LEGEND**
- ▲ SHALLOW AND DEEP SOIL VAPOR PROBE (5', 15', 25', 35')
 - ▲ SHALLOW SOIL VAPOR PROBE (5')
 - ▲ DEEP SOIL VAPOR PROBE (25' AND 35')
 - ▲ VAP AND DEEP SOIL GAS PROBE
 - ▲ SOIL VAPOR EXTRACTION WELL
 - ▲ SOIL VAPOR PROBE
 - SUB SLAB VAPOR PIN
 - MONITORING WELL LOCATION
 - 1950s BUILDING ADDITION
 - LATE 1960s BUILDING ADDITION
 - A — A' CROSS SECTION LOCATION

0 10 20ft

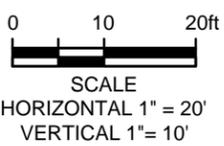
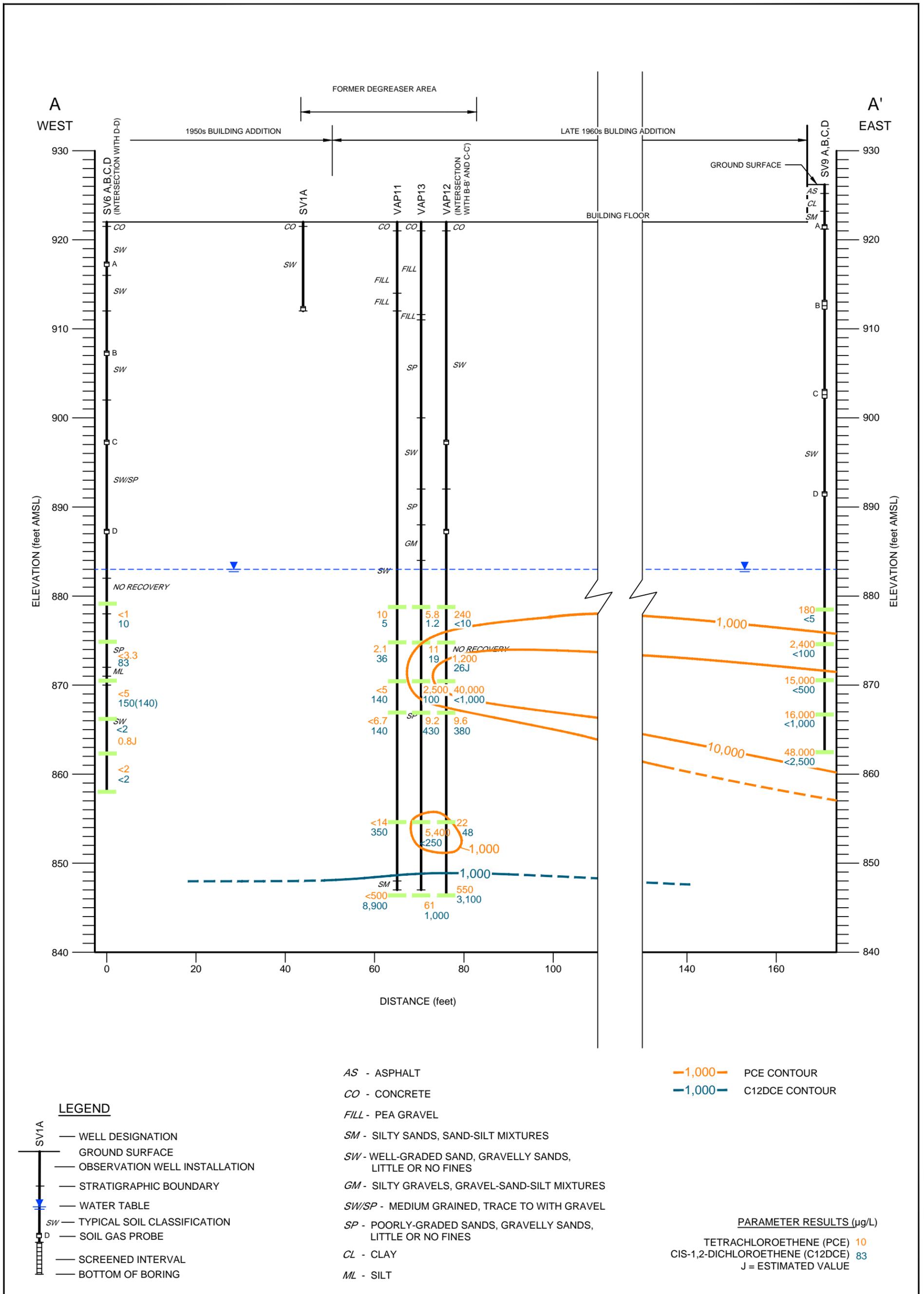


6714 WALKER STREET
ST. LOUIS PARK, MINNESOTA

88751-40
Dec 13, 2017

CROSS SECTION LOCATION MAP

FIGURE 15

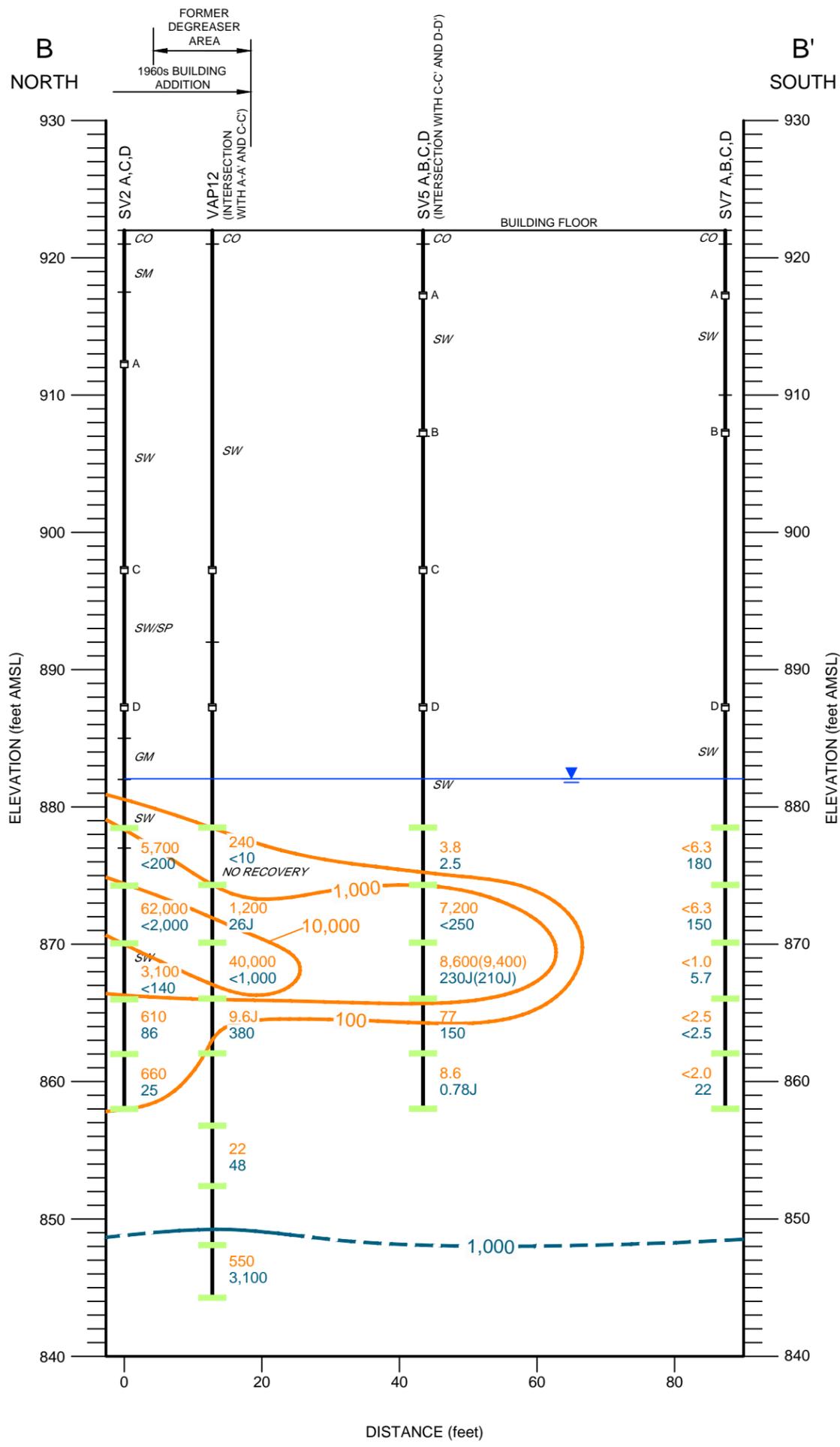


6714 WALKER STREET
ST. LOUIS PARK, MINNESOTA

CROSS SECTION A-A'
PCE AND C12DCE IN GROUNDWATER RESULTS

88751-40
Dec 8, 2017

FIGURE 16

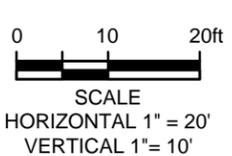


LEGEND

- SV1A WELL DESIGNATION
- GROUND SURFACE
- OBSERVATION WELL INSTALLATION
- STRATIGRAPHIC BOUNDARY
- WATER TABLE
- TYPICAL SOIL CLASSIFICATION
- SOIL GAS PROBE
- SCREENED INTERVAL
- BOTTOM OF BORING
- CO - CONCRETE
- SM - SILTY SANDS, SAND-SILT MIXTURES
- SW - WELL-GRADED SAND, GRAVELLY SANDS, LITTLE OR NO FINES
- GM - SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
- SW/SP - MEDIUM GRAINED, TRACE TO WITH GRAVEL

PARAMETER RESULTS ($\mu\text{g/L}$)
 TETRACHLOROETHENE (PCE) 10
 CIS-1,2-DICHLOROETHENE (C12DCE) 83
 J = ESTIMATED VALUE

- 1,000 — PCE CONTOUR
- 1,000 — C12DCE CONTOUR

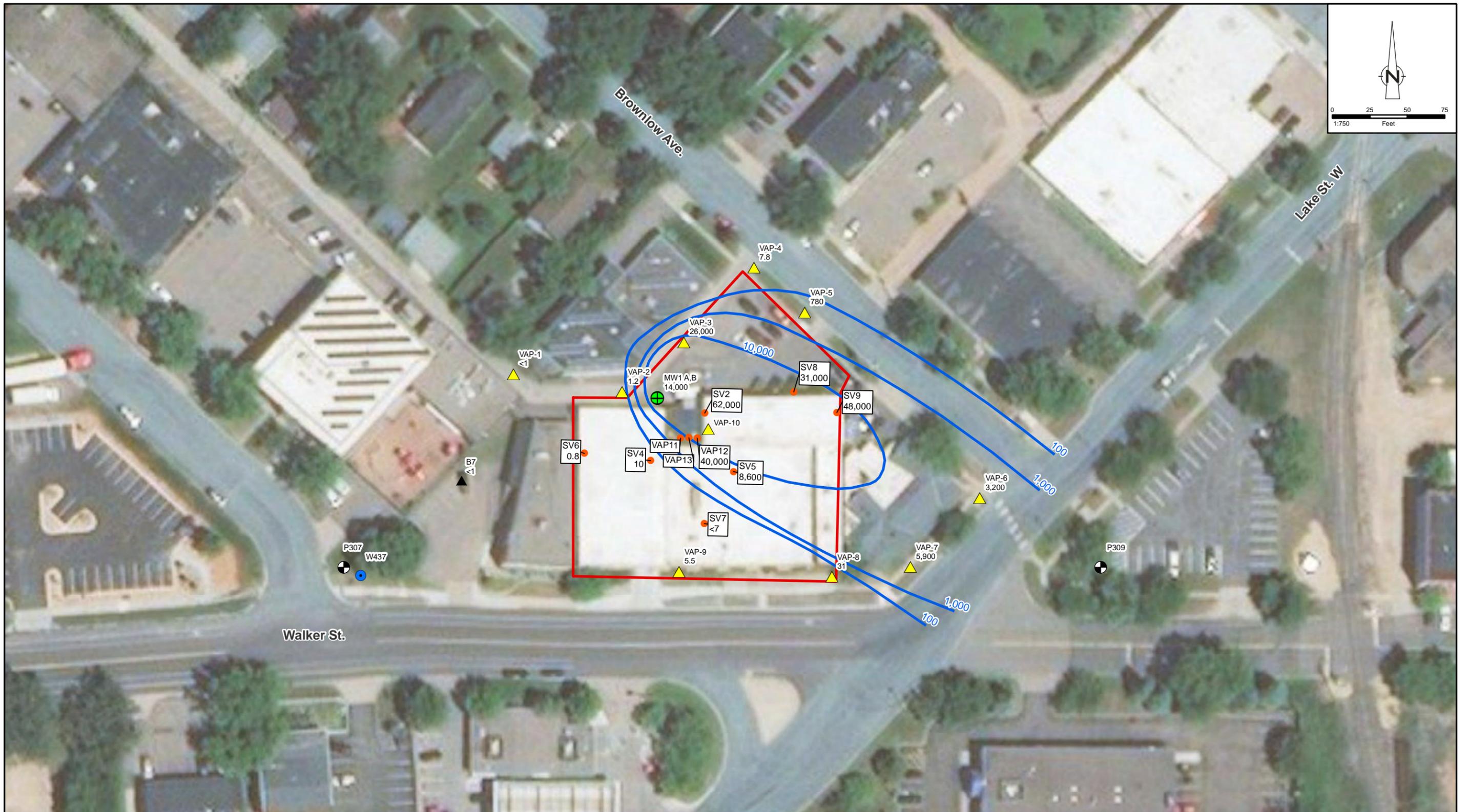


6714 WALKER STREET
 ST. LOUIS PARK, MINNESOTA

CROSS SECTION B-B'

88751-40
 Dec 8, 2017

FIGURE 17



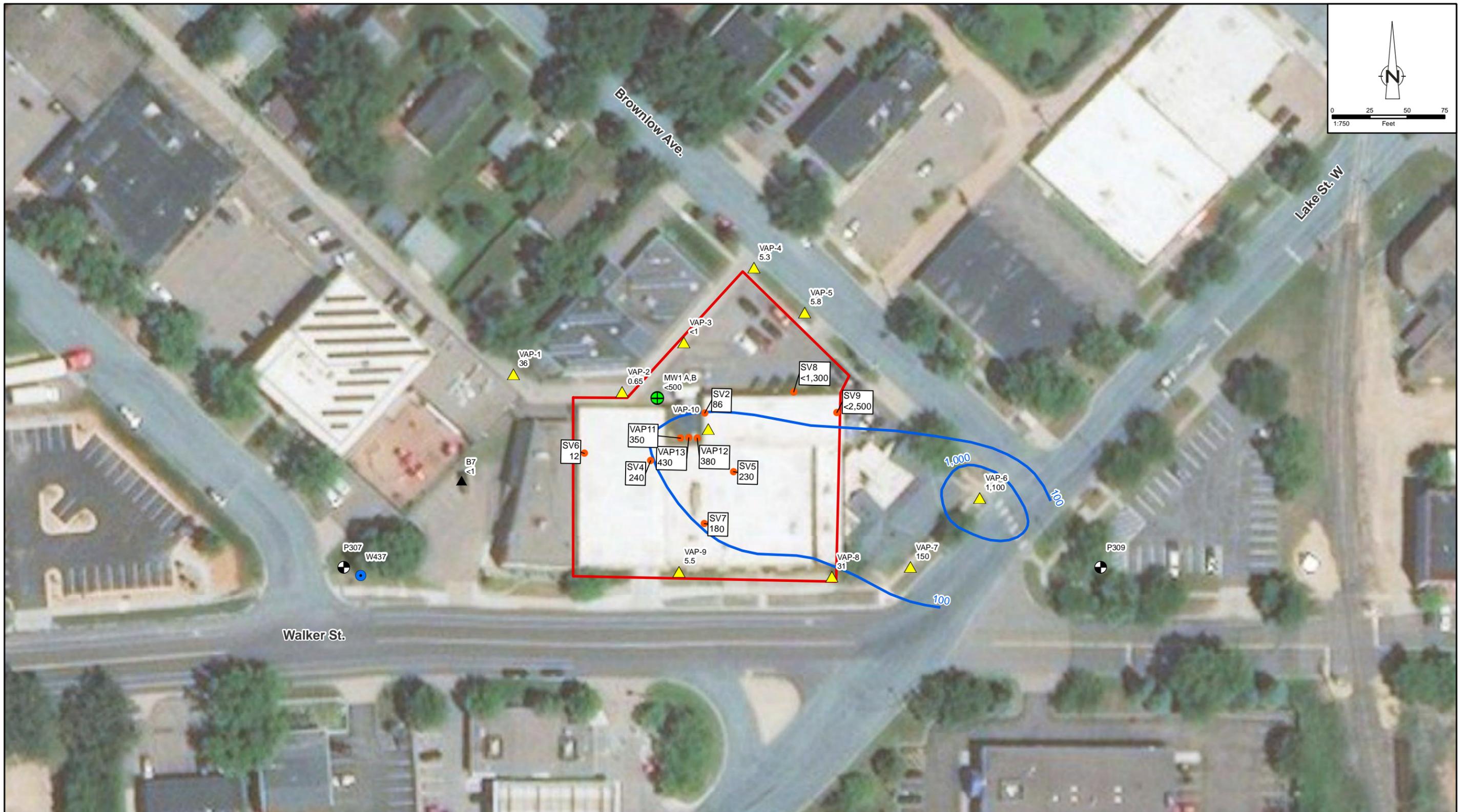
Source: ESRI Basemap Imagery, Acquisition Date Unknown, Accessed 2017; Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

LEGEND

- Soil Vapor Probe
- ⊕ Nested Well
- PCE Concentration (in µg/L)
- ▲ MPCA Boring (2014)
- ⊗ Existing Drift Well
- ft AMSL = Feet Above Mean Sea Level
- ▲ Geoprobe µg/L
- Existing Platteville Well
- Property Line

figure 18

SHALLOW PCE CONCENTRATIONS (882 - 850 FT AMSL)
 6714 WALKER STREET
 St. Louis Park, MN

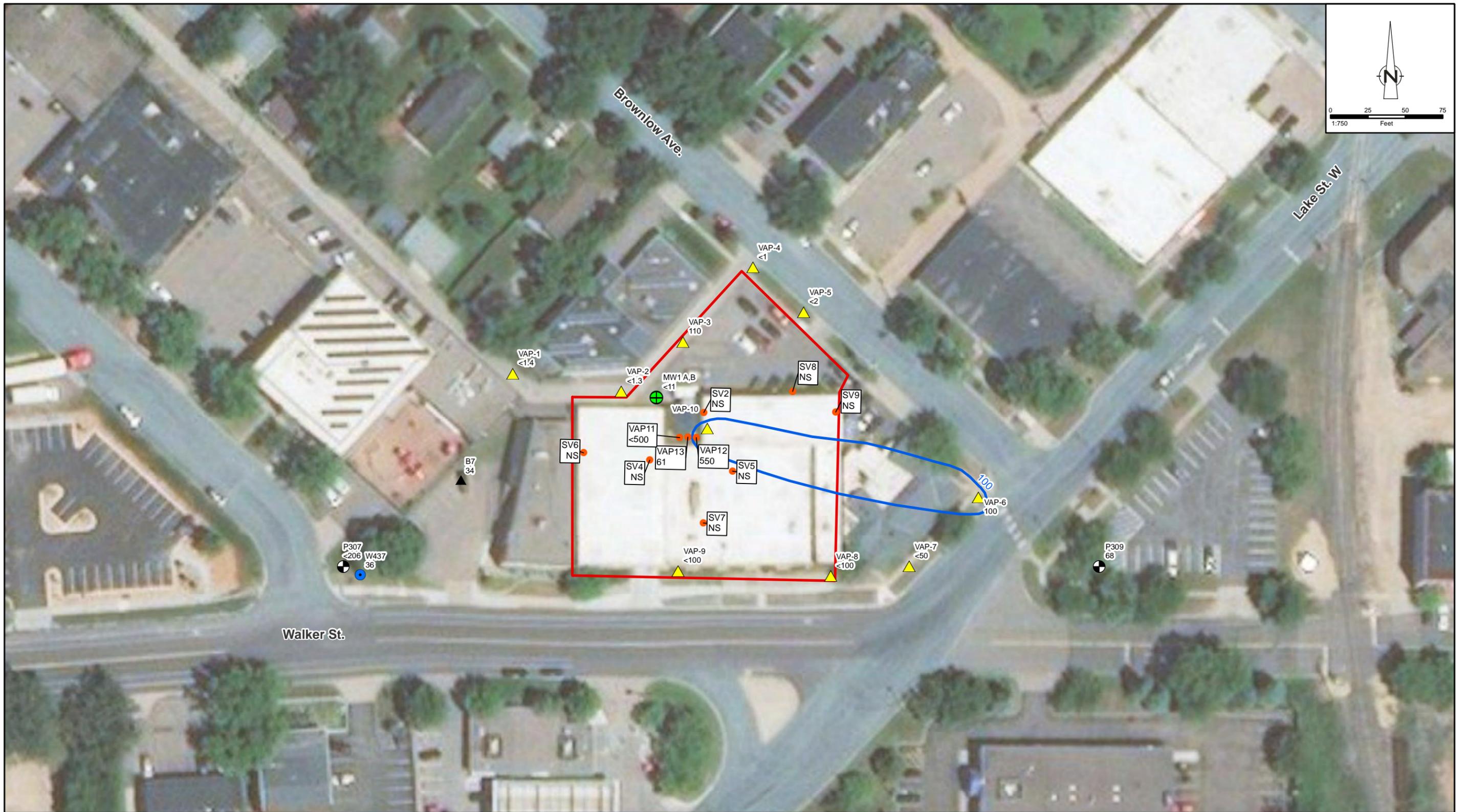


Source: ESRI Basemap Imagery, Acquisition Date Unknown, Accessed 2017; Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

LEGEND

- Soil Vapor Probe
- ⊕ Nested Well
- 100— C12DCE Concentration (in µg/L)
- ▲ MPCA Boring (2014)
- ⊗ Existing Drift Well
- ft AMSL = Feet Above Mean Sea Level
- ▲ Geoprobe µg/L
- Existing Platteville Well
- Property Line

figure 19
 SHALLOW C12DCE CONCENTRATIONS (880 - 850 FT AMSL)
 6714 WALKER STREET
 St. Louis Park, MN



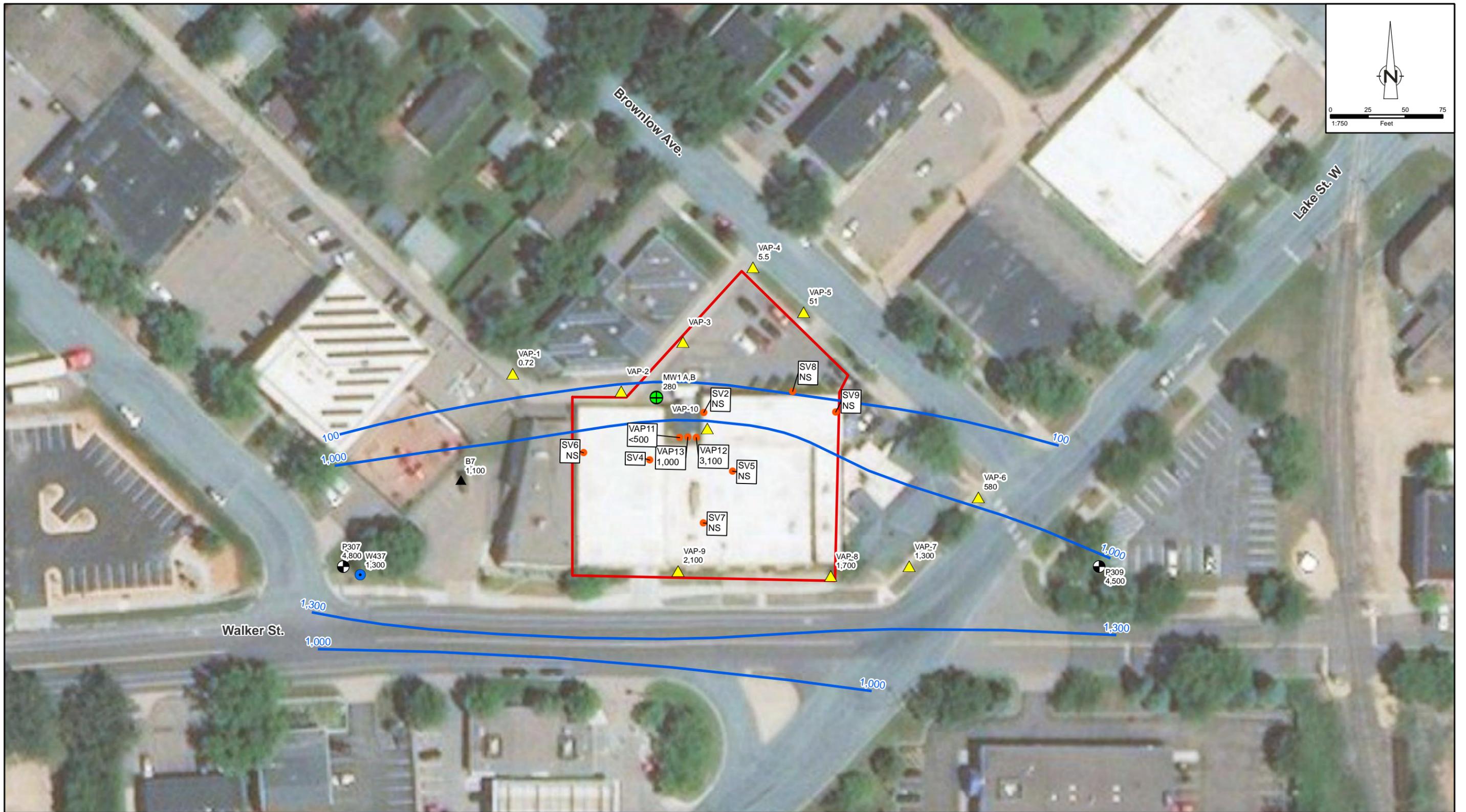
Source: ESRI Basemap Imagery, Acquisition Date Unknown, Accessed 2017; Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

LEGEND

- Soil Vapor Probe
- ⊕ Nested Well
- 100— Deep PCE Concentration (in µg/L)
- Property Line
- ▲ MPCA Boring (2014)
- ⊗ Existing Drift Well
- ft AMSL = Feet Above Mean Sea Level
- ▲ Geoprobe µg/L
- Existing Platteville Well
- NS = Not Sampled

figure 20

DEEP PCE CONCENTRATIONS (850 - 810 FT AMSL)
6714 WALKER STREET
St. Louis Park, MN



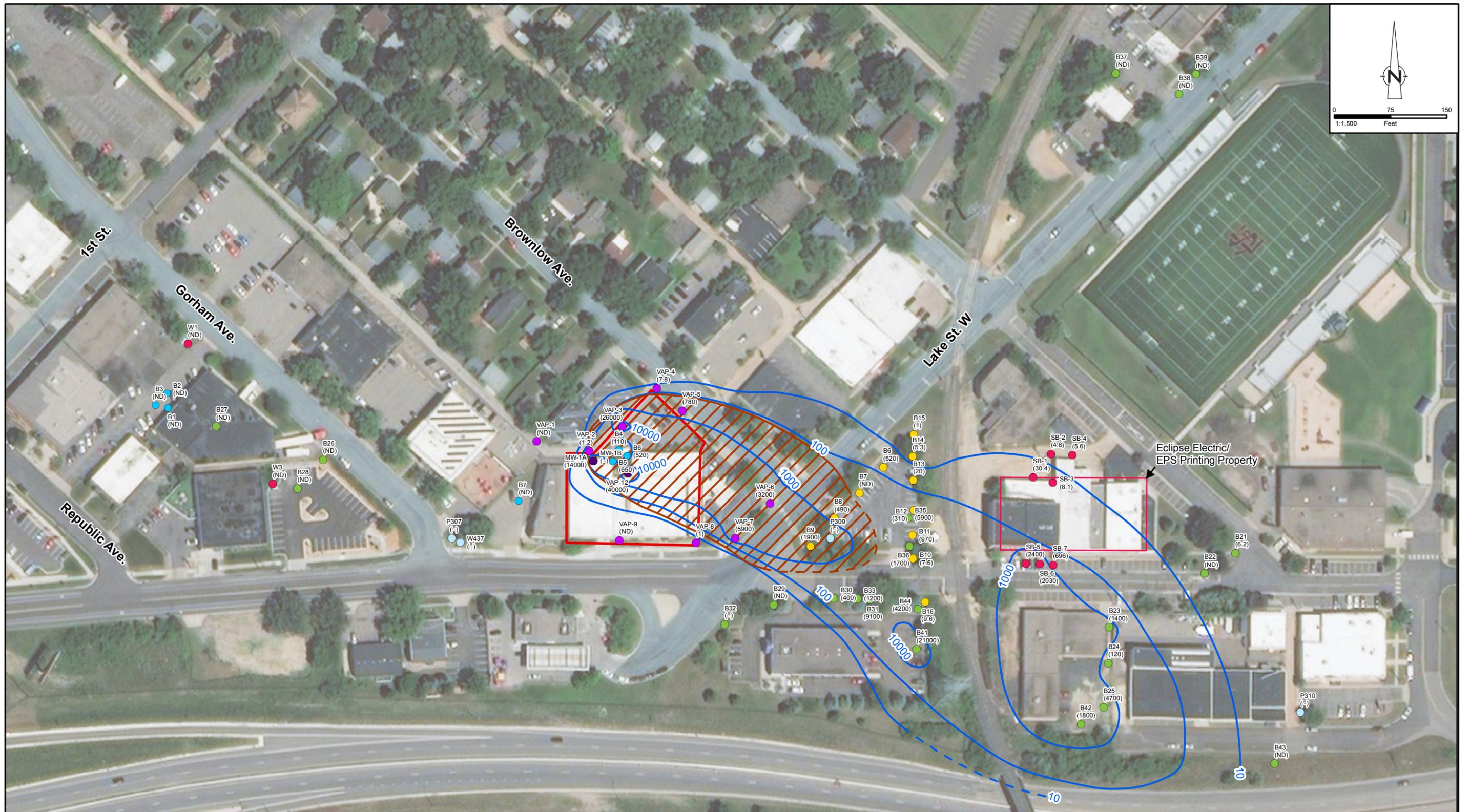
Source: ESRI Basemap Imagery, Acquisition Date Unknown, Accessed 2017; Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

LEGEND

- Soil Vapor Probe
- ⊕ Nested Well
- 100— Deep C12DCE Concentration (in µg/L)
- Property Line
- ▲ MPCA Boring (2014)
- ⊗ Existing Drift Well
- ft AMSL = Feet Above Mean Sea Level
- ▲ Geoprobe µg/L
- Existing Platteville Well
- NS = Not Sampled

figure 21

DEEP C12DCE CONCENTRATIONS (880 - 810 FT AMSL)
6714 WALKER STREET
St. Louis Park, MN



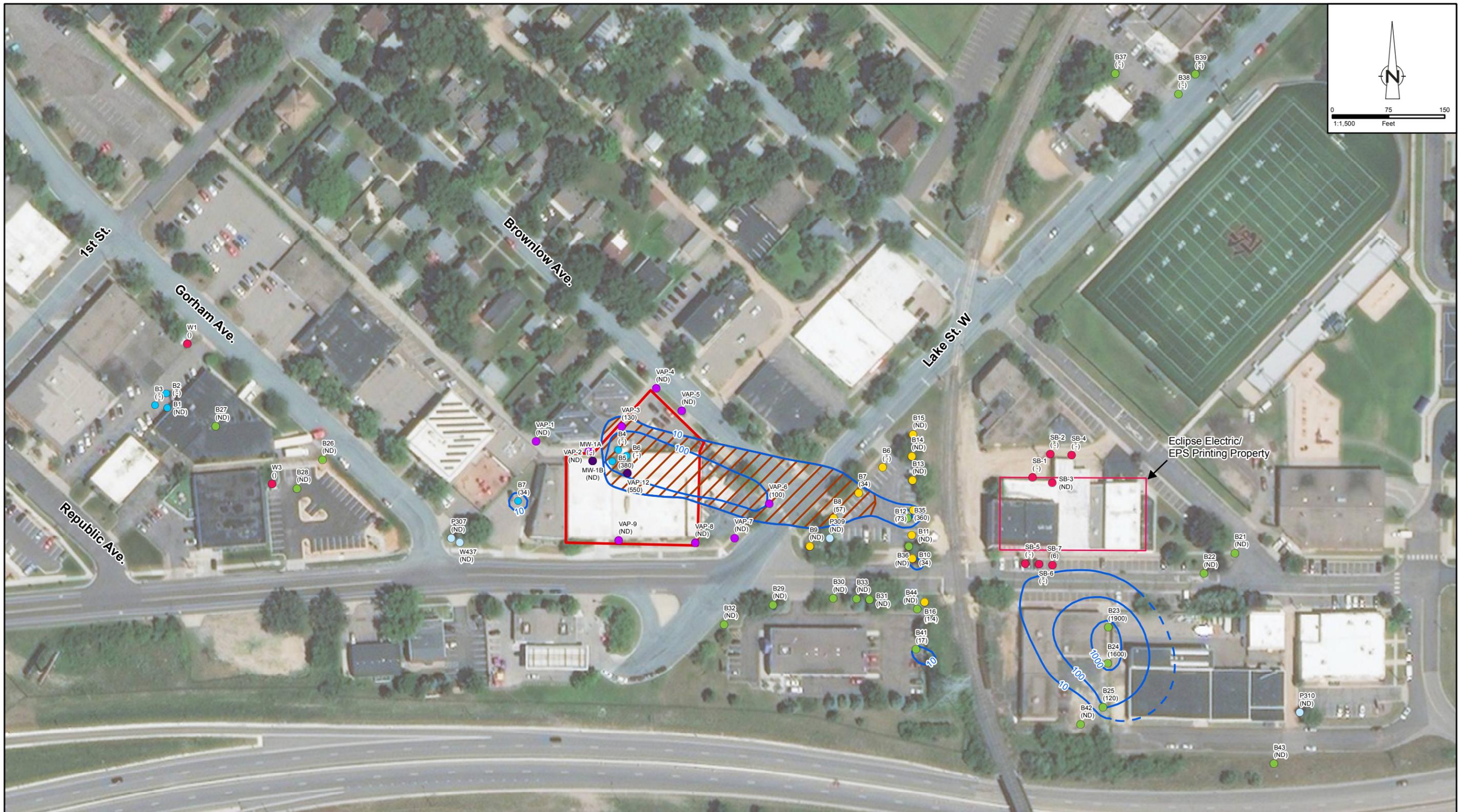
Source: ESRI Basemap Imagery, 2016; Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

LEGEND

- AECOM, 2013
- AECOM, 2014
- AECOM, 2015
- AECOM, 2016
- GHD, 2016
- GHD, 2017
- MPCA, 2016
- (650) PCE Concentration (µg/L)
- Shallow PCE Contour
- 6714 Walker PCE
- Property Line



figure 22
SHALLOW GROUNDWATER PCE CONCENTRATIONS
6714 WALKER STREET
St. Louis Park, MN



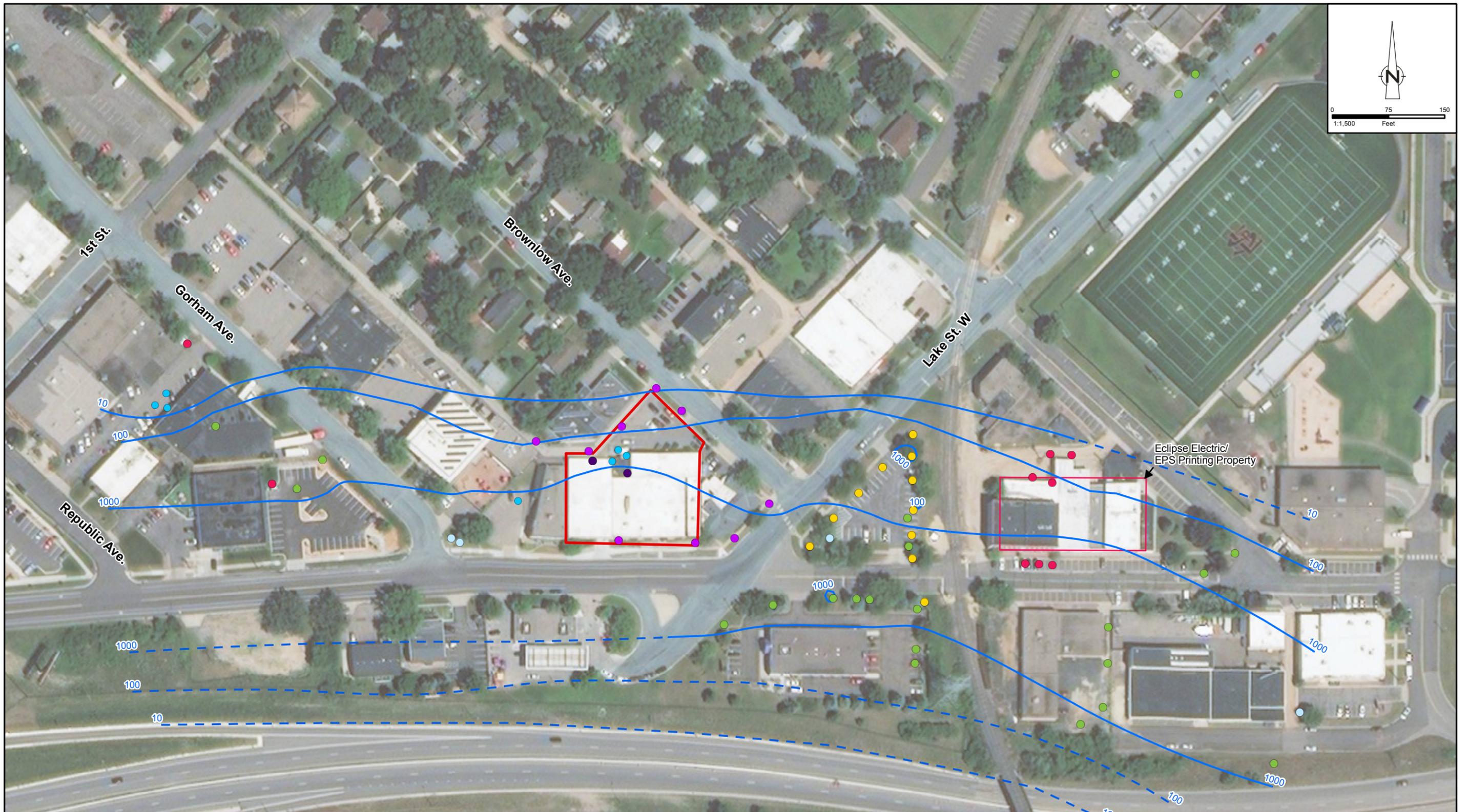
Source: ESRI Basemap Imagery, 2016; Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

LEGEND

- AECOM, 2013
- AECOM, 2014
- AECOM, 2015
- AECOM, 2016
- GHD, 2016
- GHD, 2017
- MPCA, 2016
- (650) PCE Concentration (µg/L)
- Deep PCE Contour
- ▨ 6714 Walker PCE
- ▭ Property Line



figure 24
 DEEP GROUNDWATER PCE CONCENTRATIONS
 6714 WALKER STREET
 St. Louis Park, MN



Source: ESRI Basemap Imagery, 2016; Coordinate System: NAD 1983 StatePlane Minnesota South FIPS 2203 Feet

LEGEND

- AECOM, 2013
- AECOM, 2014
- AECOM, 2015
- AECOM, 2016
- GHD, 2016
- GHD, 2017
- MPCA, 2016
- Deep DCE Contour
- ▭ Property Line

(650) DCE Concentration (µg/L)

figure 25

DEEP GROUNDWATER DCE CONCENTRATIONS
6714 WALKER STREET
St. Louis Park, MN





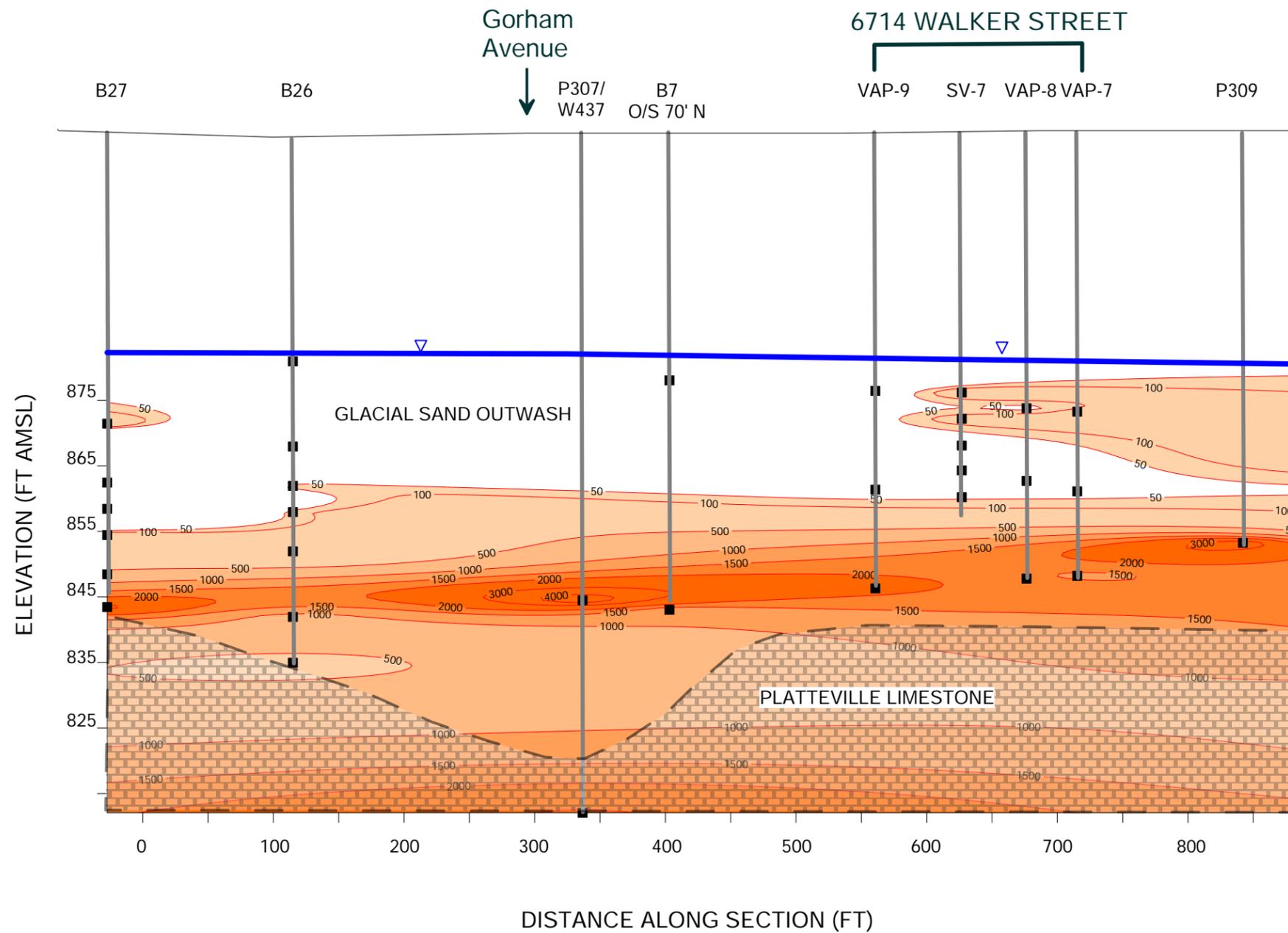
Source: ESRI Basemap Imagery, 2016; Coordinate System: NAD 1983 Contiguous USA Albers

LEGEND

- Existing Drift Well
- ▲ VAP Geoprobe
- Cross Section
- ▭ Property Line



figure 26
 C - C' CROSS SECTION LOCATION
 6714 WALKER STREET
 St. Louis Park, MN



LEGEND
 DCE PLUME (>50 µg/L)
 SAMPLE LOCATION



6714 WALKER STREET
 ST. LOUIS PARK, MN
 GENERALIZED CVOC PLUME
 CROSS-SECTION ALONG WALKER STREET

088751
 February 01, 2018

FIGURE 27

Tables

Table 1

**Soil Sampling Summary
July - August 2017
6714 Walker Street Site
St. Louis Park, Minnesota**

Location	Interval (Feet)	Date	Time	Sample Number
SV-2	1-4.5	7/18/2017	14:40	S-170718-RA-02
	15	7/18/2017	14:50	S-170718-RA-03
SV-4	20	7/26/2017	14:00	S-170726-RA-12
SV-6	51-52	7/20/2017	11:30	S-170720-RA-08
SV-7	53	7/28/2017	9:15	S-170728-RA-13
SV-9	1-3	7/17/2017	11:00	S-170717-RA-01
VAP-11	1-3.5	7/20/2017	10:45	S-170720-RA-04
	4-7	7/20/2017	10:45	S-170720-RA-05
	25	7/20/2017	11:20	S-170720-RA-06
	35	7/20/2017	11:20	S-170720-RA-07
	49	7/20/2017	13:40	S-170720-RA-09
	69	7/20/2017	14:50	S-170720-RA-10
VAP-12	1-3.5	8/4/2017	8:30	S-170804-RA-19
	4-7	8/4/2017	8:30	S-170804-RA-20
	25	8/4/2017	8:45	S-170804-RA-21
VAP-13	10-10.5	8/2/2017	11:15	S-170802-RA-14
	15.5-16	8/2/2017	12:02	S-170802-RA-15
	25-26	8/2/2017	12:25	S-170802-RA-16
	35-36	8/2/2017	12:45	S-170802-RA-17
	70-75	8/2/2017	14:30	S-170802-RA-18

Table 2

Groundwater Sampling Summary
July - August 2017
6714 Walker Street Site
St. Louis Park, Minnesota

Location	Interval (Feet)	Date	Time	pH	Temp. (C)	Specific Conductance		DO (mg/L)	Turbidity (NTU)	Water Clarity	Sample Number	QA/QC
						(uS/cm)	ORP					
SV-2	42-46	7/19/2017	8:30	7.45	18.3	1470	-29	---	---	Cloudy	W-170719-RA-13	---
	46-50	7/19/2017	8:50	7.23	19.1	1739	-155	---	---	Cloudy	W-170719-RA-14	---
	50-54	7/19/2017	10:00	7.33	19.9	1322	-51	---	---	Cloudy	W-170719-RA-15	W-170719-RA-16 (Field Blank)
	54-58	7/19/2017	12:50	7.51	19.8	1222	-189	---	---	Cloudy	W-170719-RA-17	---
	58-62	7/19/2017	13:50	7.51	21.3	1426	-231	---	---	Cloudy / Effervessing	W-170719-RA-18	---
SV-4	42-46	7/21/2017	8:50	7.57	24.0	1361	-111	---	---	Cloudy	W-170721-RA-19	---
	46-50	7/21/2017	9:45	7.44	18.4	1685	-169	---	---	Cloudy	W-170721-RA-20	---
	50-54	7/21/2017	10:20	7.25	18.6	1450	-177	---	---	Cloudy	W-170721-RA-21	---
	54-58	7/21/2017	11:00	7.16	17.2	1661	-128	---	---	Cloudy	W-170721-RA-22	---
	58-62	7/21/2017	11:50	7.17	18.1	1586	-134	---	---	Cloudy	W-170721-RA-23	W-170721-RA-27 (Rinsate Blank)
SV-5	42-46	7/26/2017	14:10	7.33	21.3	1660	-214	---	---	Cloudy	W-170726-RA-32	---
	46-50	7/27/2017	9:20	7.25	19.7	1838	-148	---	---	Cloudy	W-170727-RA-39	W-170727-RA-40 (Field Blank)
	50-54	7/27/2017	10:15	7.30	20.4	1428	-179	---	---	Cloudy	W-170727-RA-41	W-170727-RA-42 (Duplicate)
	54-58	7/27/2017	13:35	7.16	20.4	1546	-156	---	---	Cloudy	W-170727-RA-43	---
	58-62	7/27/2017	15:50	7.18	23.1	1660	-174	---	---	Cloudy	W-170727-RA-33	---
SV-6	42-46	7/19/2017	8:15	7.50	21.3	1888	-149	---	---	Cloudy	W-170719-RA-07	---
	46-50	7/19/2017	9:10	7.40	19.2	1669	-216	---	---	Cloudy / Effervessing	W-170719-RA-08	---
	50-54	7/19/2017	10:20	7.35	19.9	1565	-217	---	---	Cloudy	W-170719-RA-09	W-170719-RA-10 (Duplicate)
	54-58	7/19/2017	11:00	7.28	20.4	1574	-200	---	---	Cloudy	W-170719-RA-11	---
	58-62	7/19/2017	12:55	7.26	19.0	1498	-154	---	---	Cloudy	W-170719-RA-12	---
SV-7	42-46	7/27/2017	9:10	NA	NA	NA	NA	---	---	Cloudy	W-170727-RA-34	---
	46-50	7/27/2017	10:00	7.66	23.6	1467	-287	---	---	Cloudy	W-170727-RA-35	---
	50-54	7/27/2017	10:55	7.41	22.8	1452	-288	---	---	Cloudy	W-170727-RA-36	---
	54-58	7/27/2017	13:20	7.29	21.0	1411	-219	---	---	Cloudy	W-170727-RA-37	---
	58-62	7/27/2017	14:05	7.26	20.0	1341	-300	---	---	Cloudy	W-170727-RA-38	---
SV-8	46-50	8/17/2017	7:45	7.25	18.2	1231	-143	---	---	Cloudy	W-170817-RA-56	---
	54-58	8/17/2017	8:30	7.33	17.4	1158	-186	---	---	Cloudy	W-170817-RA-57	---

Table 2

Groundwater Sampling Summary
July - August 2017
6714 Walker Street Site
St. Louis Park, Minnesota

Location	Interval (Feet)	Date	Time	pH	Temp. (C)	Specific Conductance		DO (mg/L)	Turbidity (NTU)	Water Clarity	Sample Number	QA/QC
						(uS/cm)	ORP					
SV-9	42-46	7/17/2017	12:50	7.34	21.0	1157	-63	---	---	Cloudy	W-170717-RA-01	---
	46-50	7/17/2017	13:20	7.27	23.1	1608	-462	---	---	Cloudy / Effervessing	W-170717-RA-02	---
	50-54	7/17/2017	13:50	7.44	23.1	1108	-145	---	---	Cloudy / Effervessing	W-170717-RA-03	---
	54-58	7/17/2017	15:20	7.32	26.3	1373	-460	---	---	Cloudy / Effervessing	W-170717-RA-04	---
	58-62	7/17/2017	16:10	7.20	25.1	1381	-215	---	---	Cloudy / Effervessing	W-170717-RA-05	W-170717-RA-06 (Duplicate)
VAP-11	42-46	7/21/2017	11:35	7.49	22.3	1636	-46	---	---	Cloudy	W-170721-RA-25	W-170721-RA-24 (Field Blank)
	46-50	7/21/2017	12:00	7.29	19.1	1813	-94	---	---	Cloudy	W-170721-RA-26	
	50-54	7/21/2017	13:50	7.33	18.7	1423	-153	---	---	Cloudy	W-170721-RA-28	
	54-58	7/26/2017	12:00	7.19	19.8	1568	-138	---	---	Cloudy	W-170726-RA-29	
	63-67	7/26/2017	12:30	7.13	20.2	1478	-149	---	---	Cloudy	W-170726-RA-30	
	71-75	7/26/2017	13:50	7.68	24.4	1121	-167	---	---	Cloudy	W-170726-RA-31	
VAP-12	42-46	8/3/2017	9:05	7.42	17.1	1159	-55	---	---	Cloudy	W-170803-RA-50	
	46-50	8/3/2017	10:05	7.43	19.7	1780	-41	---	---	Cloudy	W-170803-RA-51	
	50-54	8/3/2017	10:55	7.44	22.7	1456	-203	---	---	Cloudy	W-170803-RA-52	
	54-58	8/3/2017	12:00	7.24	26.0	1534	-179	---	---	Cloudy	W-170803-RA-53	
	62-67	8/3/2017	13:00	7.24	27.0	1688	-206	---	---	Cloudy	W-170803-RA-54	
	71-75	8/3/2017	15:30	7.29	29.5	1167	-179	---	---	Cloudy	W-170803-RA-55	
VAP-13	42-46	8/1/2017	9:53	6.89	20.1	NA	100	---	---	Cloudy	W-170801-RA-44	MS/MSD
	46-50	8/1/2017	10:35	7.25	22.9	NA	102	---	---	Cloudy	W-170801-RA-45	
	50-54	8/1/2017	11:40	7.19	24.3	1700	-134	---	---	Cloudy	W-170801-RA-46	
	54-58	8/1/2017	13:20	7.14	23.5	1441	-160	---	---	Cloudy	W-170801-RA-47	
	63-67	8/1/2017	14:25	7.01	23.3	1586	-130	---	---	Cloudy	W-170801-RA-48	
	71-75	8/1/2017	16:40	7.15	24.7	1425	-158	---	---	Cloudy	W-170801-RA-49	
MW-1A	NA	8/17/2017	13:50	7.24	13.8	1452	-69	2.91	11.5	Clear		
			13:55	7.19	13.9	1462	-64	3.25	5.0	Clear		
			14:00	7.18	13.9	1462	-63	3.29	4.2	Clear		
			14:05	7.18	13.9	1460	-63	3.32	3.5	Clear	W-170817-RA-59	
MW-1B	NA	8/17/2017	13:25	7.05	13.2	1495	-127	1.05	0.2	Clear		
			13:30	7.05	13.3	1496	-127	1.04	0.2	Clear		
			13:35	7.02	13.3	1498	-128	0.97	0.7	Clear	W-170817-RA-58	

Table 3

**Soil Gas Sampling Summary
July - August 2017
6714 Walker Street Site
St. Louis Park, Minnesota**

Location	Interval (Feet)	Date	Time	Sample Number	QA/QC
SS-1	--	9/6/2017	12:28	SS-170906-RA-03	
SS-2	--	9/6/2017	10:50	SS-170906-RA-01	
SS-3	--	9/6/2017	12:49	SS-170906-RA-05	
SS-4	--	9/6/2017	12:35	SS-170906-RA-04	
SS-5	--	9/6/2017	10:56	SS-170906-RA-02	
SS-6	--	9/6/2017	12:29	SS-170906-RA-09	
SS-7	--	9/6/2017	11:08	SS-170906-RA-08	
SS-8	--	9/6/2017	10:49	SS-170906-RA-06	
SS-9	--	9/6/2017	11:03	SS-170906-RA-07	
SV-1	5	9/7/2017	9:48	G-170907-RA-13	
SV-2A	5	9/6/2017	14:40	G-170906-RA-06	
SV-2C	25	9/6/2017	14:24	G-170906-RA-05	
SV-2D	35	9/6/2017	14:24	G-170906-RA-04	
SV-4A	5	9/7/2017	10:23	G-170907-RA-14	
SV-4B	15	9/7/2017	10:23	G-170907-RA-15	
SV-4C	25	9/7/2017	10:23	G-170907-RA-16	
SV-4D	35	9/7/2017	10:23	G-170907-RA-17	
SV-5A	5	9/7/2017	12:26	G-170907-RA-32	
SV-5B	15	9/7/2017	12:26	G-170907-RA-33	
SV-5C	25	9/7/2017	12:23	G-170907-RA-23	G-170907-RA-22 (Duplicate)
SV-5D	35	9/7/2017	12:23	G-170907-RA-24	

Table 3

**Soil Gas Sampling Summary
July - August 2017
6714 Walker Street Site
St. Louis Park, Minnesota**

Location	Interval (Feet)	Date	Time	Sample Number	QA/QC
SV-6A	5	9/7/2017	9:39	G-170907-RA-09	
SV-6B	15	9/7/2017	9:39	G-170907-RA-10	
SV-6C	25	9/7/2017	9:39	G-170907-RA-11	
SV-6D	35	9/7/2017	9:39	G-170907-RA-12	
SV-7A	5	9/7/2017	10:47	G-170907-RA-18	
SV-7B	15	9/7/2017	10:47	G-170907-RA-19	
SV-7C	25	9/7/2017	10:47	G-170907-RA-20	
SV-7D	35	9/7/2017	10:47	G-170907-RA-21	
SV-8A	5	9/7/2017	13:23	G-170907-RA-30	G-170907-RA-29 (Duplicate)
SV-8B	14	9/7/2017	13:23	G-170907-RA-31	
SV-9A	5	9/7/2017	13:16	G-170907-RA-25	
SV-9B	15	9/7/2017	13:16	G-170907-RA-26	
SV-9C	25	9/7/2017	13:16	G-170907-RA-27	
SV-9D	35	9/7/2017	13:16	G-170907-RA-28	
SV-10A	5	9/6/2017	12:34	G-170906-RA-01	
SV-11A	5	9/6/2017	13:19	G-170906-RA-03	
SV-12A	5	9/6/2017	12:57	G-170906-RA-02	
VAP-12C	25	9/6/2017	15:05	G-170906-RA-07	
VAP-12D	35	9/6/2017	15:05	G-170906-RA-08	
SVE-1	5-15	9/15/2017	13:00	SVE-1-170915-RA-01	
SVE-2	5-15	9/15/2017	13:00	SVE-2-170915-RA-02	

Table 4

Soil Analytical Results Summary
6714 Walker Street
St. Louis Park, Minnesota

			1,1-Dichloroethene	2-Butanone (Methyl ethyl ketone) (MEK)	2-Hexanone	4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	Acetone	Benzene	Carbon disulfide	Carbon tetrachloride	cis-1,2-Dichloroethene	Cyclohexane	Ethylbenzene	Isopropyl benzene	Methyl acetate	Methyl cyclohexane	Methylene chloride	Naphthalene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes (total)		
		Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg		
Location	Sample ID																									
SV-2	S-170718-RA-02	(1-4.5) ft	(5.3) U	(21) U	(21) U	(21) U	(21) U	(5.3) U	(5.3) U	(5.3) U	(5.3) U	(11) U	0.33 J	(5.3) U	(27) U	(11) U	(5.3) U	(5.3) U	4.5 J	1.2 J	(5.3) U	(5.3) U	(5.3) U	1.5 J		
SV-2	S-170718-RA-03	(15-) ft	(4.8) U	(19) U	(19) U	(19) U	(19) U	(4.8) U	(4.8) U	(4.8) U	(4.8) U	(9.6) U	(4.8) U	(4.8) U	(24) U	(9.6) U	(4.8) U	(4.8) U	0.78 J	0.74 J	(4.8) U	(4.8) U	(4.8) U	(9.6) U		
SV-4	S-170726-RA-12	(20-) ft	(310) U	(1200) U	(1200) U	(1200) U	(1200) U	(310) U	(310) U	(310) U	(310) U	(610) U	(310) U	(310) U	3600 J	(610) U	180 J	97 J	920 J	(310) U	(310) U	(310) U	(310) U	(610) U		
SV-6	S-170720-RA-08	(51-52) ft	1.1 J	(18) U	(18) U	(18) U	4.1 J	4.5	0.62 J	(4.5) U	98	(9.0) U	(4.5) U	0.74 J	(23) U	1.6 J	(3.1) U	6.2	(4.5) U	0.74 J	14	0.63 J	8.8	3.3 J		
SV-7	S-170728-RA-13	(53-) ft	0.77 J	(18) U	(18) U	(18) U	(18) U	5.6	(4.6) U	(4.6) U	67	0.88 J	(4.6) U	0.21 J	(23) U	2.2 J	(4.6) U	(4.6) U	(4.6) U	0.55 J	23	0.57 J	6.8	0.50 J		
SV-9	S-170717-RA-01	(1-3) ft	(4.1) U	(16) U	(16) U	(16) U	(16) U	(4.1) U	(4.1) U	(4.1) U	(4.1) U	(8.2) U	(4.1) U	(4.1) U	(21) U	(8.2) U	(4.1) U	(4.1) U	(4.1) U	(4.1) U	(4.1) U	0.74 J	(4.1) U	(8.2) U		
Former Degreaser Area																										
VAP-11	S-170720-RA-04	(1-3.5) ft	(400) U	(1600) U	(1600) U	510 J	(1600) U	(400) U	(400) U	(400) U	(400) U	(790) U	470 J	(400) U	(2000) U	(790) U	(400) U	(400) U	81 J	(400) U	(400) U	(400) U	(400) U	2800 J		
VAP-11	S-170720-RA-05	(4-7) ft	(6.1) U	3.2 J	(24) U	1.2 J	25	(6.1) U	(6.1) U	(6.1) U	(6.1) U	(12) U	(6.1) U	(6.1) U	(30) U	(12) U	(4.6) U	2.3 J	0.86 J	0.51 J	(6.1) U	(6.1) U	(6.1) U	1.5 J		
VAP-11	S-170720-RA-06	(25-) ft	(250) U	(1000) U	(1000) U	(1000) U	(1000) U	(250) U	(250) U	(250) U	(250) U	(510) U	(250) U	(250) U	(1300) U	(510) U	(260) U	(250) U	1100	(250) U	(250) U	(250) U	(250) U	(510) U		
VAP-11	S-170720-RA-07	(35-) ft	(4.1) U	(16) U	(16) U	(16) U	7.5 J	(4.1) U	(4.1) U	0.20 J	(4.1) U	(8.2) U	(4.1) U	(4.1) U	(20) U	(8.2) U	(2.4) U	(4.1) U	1.1 J	0.34 J	(4.1) U	(4.1) U	(4.1) U	(8.2) U		
VAP-11	S-170720-RA-09	(49-) ft	(230) U	(920) U	(920) U	(920) U	(920) U	(230) U	(230) U	(230) U	34 J	(460) U	(230) U	(230) U	(1100) U	(460) U	(250) U	(230) U	360	(230) U	(230) U	(230) U	(230) U	(460) U		
VAP-11	S-170720-RA-10	(69-) ft	(4.3) UJ	(17) UJ	(17) UJ	(17) UJ	(17) UJ	4.3 J	0.25 J	(4.3) U	40 J	(8.7) UJ	0.90 J	0.32 J	(22) UJ	(8.7) UJ	(4.3) UJ	(4.3) UJ	(4.3) UJ	0.45 J	4.5 J	(4.3) UJ	12 J	0.39 J		
VAP-11	S-170720-RA-11	(74-) ft	(230) U	(920) U	(920) U	(920) U	(920) U	(230) U	(230) U	(230) U	2000 J	(460) U	(230) U	(230) U	(1100) U	(460) U	(230) U	(230) U	(230) U	(230) U	(230) U	(230) U	(230) U	(460) U		
VAP-12	S-170804-RA-19	(1-3.5) ft	(6.4) U	(25) U	(25) U	(25) U	(25) U	(6.4) U	(6.4) U	(6.4) U	(6.4) U	(13) U	(6.4) U	(6.4) U	(32) U	(13) U	(6.4) U	0.80 J	8.9	(6.4) U	(6.4) U	(6.4) U	(6.4) U	(13) U		
VAP-12	S-170804-RA-20	(4-7) ft	(3.7) U	(15) U	0.81 J	1.9 J	19	(3.7) U	(3.7) U	(3.7) U	(3.7) U	(7.4) U	(3.7) U	(3.7) U	(18) U	(7.4) U	0.55 J	0.46 J	(3.7) U	(3.7) U	(3.7) U	(3.7) U	(3.7) U	(7.4) U		
VAP-12	S-170804-RA-21	(25-) ft	(5.4) U	(21) U	(21) U	(21) U	(21) U	(5.4) U	(5.4) U	(5.4) U	(5.4) U	(11) U	(5.4) U	(5.4) U	(27) U	(11) U	(5.4) U	(5.4) U	2.1 J	0.39 J	(5.4) U	(5.4) U	(5.4) U	(11) U		
VAP-13	S-170802-RA-14	(10-10.5) ft	(240) U	(960) U	(960) U	(960) U	(960) U	(240) U	(240) U	(240) U	(240) U	(480) U	(240) U	(240) U	(1200) U	(480) U	(240) U	(240) U	2100	(240) U	(240) U	(240) U	(240) U	(480) U		
VAP-13	S-170802-RA-15	(15.5-16) ft	(4.6) U	(19) U	(19) U	(19) U	(19) U	(4.6) U	(4.6) U	(4.6) U	(4.6) U	(9.3) U	(4.6) U	(4.6) U	(23) U	(9.3) U	(4.6) U	(4.6) U	110	0.37 J	(4.6) U	(4.6) U	(4.6) U	(9.3) U		
VAP-13	S-170802-RA-16	(25-26) ft	(4.0) U	(16) U	(16) U	(16) U	(16) U	(4.0) U	(4.0) U	(4.0) U	(4.0) U	(8.0) U	(4.0) U	(4.0) U	(20) U	(8.0) U	(4.0) U	(4.0) U	86	0.27 J	(4.0) U	(4.0) U	(4.0) U	(8.0) U		
VAP-13	S-170802-RA-17	(35-36) ft	(4.2) U	(17) U	(17) U	(17) U	8.9 J	(4.2) U	(4.2) U	(4.2) U	(4.2) U	(8.5) U	(4.2) U	(4.2) U	(21) U	(8.5) U	(4.2) U	(4.2) U	14	(4.2) U	(4.2) U	(4.2) U	(4.2) U	(8.5) U		
VAP-13	S-170802-RA-18	(70-75) ft	(310) U	(1200) U	(1200) U	49 J	(1200) U	(310) U	(310) U	(310) U	140 J	(610) U	(310) U	(310) U	(1500) U	(610) U	(310) U	(310) U	960	(310) U	(310) U	(310) U	(310) U	260 J		

Notes:

- U Not detected at the associated reporting limit.
- J Estimated concentration.
- UJ Not detected; associated reporting limit is estimated.

Bold Text Detected volatile organic compounds

Table 5
Analytical Results Summary
Soil Gas
6714 Walker Street
St. Louis Park, Minnesota

		1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,2-Dichloropropane	1,2-Dichlorotetrafluoroethane (CFC 114)	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone (Methyl ethyl ketone) (MEK)	2-Hexanone	4-Ethyl toluene	4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	Acetone	Benzene	Bromodichloromethane	Bromoforn	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform (Trichloromethane)	Chloromethane (Methyl chloride)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dichlorodifluoromethane (CFC-12)	Ethylbenzene	m&p-Xylenes	Methylene chloride	Naphthalene	o-Xylene	Styrene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane (CFC-11)	Trifluorochloroethane (CFC-113)	Vinyl chloride			
Units	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	
ISV	10000	1	2	1000	600	210	600	10	NA	7000	NA	200	10000	110	NA	8000	87000	45	NA	30	2000	16	180	30000	300	300	NA	60	NA	600	39	300	60	300	3000	33	18000	200	60	7	2000	NA	230	2000	NA	22		
33XISV																																																
Sub-Slab Pins	Sample ID																																															
SS-1	SS-170906-RA-03	(3.9) U	(6.5) U	(5.2) U	(2.9) U	(7.5) U	(9.4) U	(5.7) U	(4.4) U	(6.7) U	(4.7) U	(5.7) U	(5.7) U	5.5	(3.9) U	(4.7) U	(3.9) U	120	3.3	(4.8) U	(9.8) U	6.9	(12) U	(3.3) U	(5.0) U	(3.5) U	(2.9) U	(3.8) U	(4.3) U	(8.1) U	(4.7) U	(4.1) U	12	7.8	(10) U	(4.1) U	(4.1) U	12	29	(3.8) U	(4.3) U	(5.1) U	5.6	(7.3) U	(2.4) U			
SS-2	SS-170906-RA-01	10	(2.7) U	(2.2) U	4.7	16	(3.9) U	(2.4) U	2.0	3.1	2.1	(2.4) U	(2.4) U	8.2	(1.6) U	2.4	4.4	100	4.9	2.8	(4.1) U	39	(5.0) U	1.8	(2.1) U	2.6	3.3	4.1	2.0	(3.4) U	3.2	5.4	15	17	(4.2) U	5.5	(1.7) U	18	44	2.2	(1.8) U	15	8.2	4.6	4.2			
SS-3	SS-170906-RA-05	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	(2.4) U	(1.6) U	(2.0) U	(1.6) U	54	(1.3) U	(2.0) U	(4.1) U	4.8	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	(1.6) U	(1.8) U	(3.4) U	(2.0) U	(1.7) U	(3.5) U	4.3	(4.2) U	(1.7) U	(1.7) U	(2.7) U	(1.5) U	(1.6) U	(1.8) U	(2.1) U	2.6	(3.1) U	(1.0) U			
SS-4	SS-170906-RA-04	(11) U	(18) U	(14) U	(7.9) U	(21) U	(26) U	(16) U	(12) U	(28) U	(13) U	(16) U	(16) U	(15) U	(11) U	(13) U	(11) U	280	(8.4) U	(13) U	(27) U	(16) U	(33) U	(9.0) U	(2.1) U	(9.6) U	(11) U	(10) U	(12) U	(22) U	(13) U	(11) U	(23) U	(9.1) U	(4.1) U	31	(10) U	(12) U	(14) U	(15) U	(20) U	(6.7) U	(1.0) U					
SS-5	SS-170906-RA-02	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	8.5	(1.6) U	(2.0) U	10	84	2.7	(2.0) U	(4.1) U	8.0	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	2.9	(1.8) U	(3.4) U	2.0	5.4	16	3.5	(4.2) U	5.5	(1.7) U	14	23	(1.6) U	(1.8) U	3.4	3.3	(3.1) U	(1.0) U			
SS-6	SS-170906-RA-09	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	3.0	(2.4) U	(2.4) U	7.3	1.7	5.4	3.8	57	2.5	(2.0) U	(4.1) U	120	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	(1.6) U	(1.8) U	(3.4) U	2.6	3.3	12	12	(4.2) U	5.2	(1.7) U	540	27	(1.6) U	(1.8) U	4.5	4.4	(3.1) U	(1.0) U			
SS-7	SS-170906-RA-08	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	2.6	(1.6) U	(2.0) U	(1.6) U	23	1.4	(2.0) U	(4.1) U	19	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	(1.6) U	(1.8) U	(3.4) U	2.9	2.5	5.7	36	(4.2) U	1.8	(1.7) U	120	23	(1.6) U	(1.8) U	6.9	5.2	(3.1) U	(1.0) U			
SS-8	SS-170906-RA-06	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	16	(1.6) U	(2.0) U	35	44	2.5	(2.0) U	(4.1) U	15	(5.0) U	(1.4) U	(2.1) U	2.1	(1.7) U	(1.6) U	(1.8) U	(3.4) U	4.4	6.8	17	24	(4.2) U	5.3	(1.7) U	21	42	(1.6) U	(1.8) U	4.1	5.8	(3.1) U	(1.0) U			
SS-9	SS-170906-RA-07	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	8.1	(1.6) U	(2.0) U	2.1	80	1.5	(2.0) U	(4.1) U	6.2	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	4.6	(1.8) U	(3.4) U	24	2.4	8.8	7.1	(4.2) U	5.4	(1.7) U	37	22	(1.6) U	(1.8) U	2.8	2.8	(3.1) U	(1.0) U			
Soil Gas Probes																																																
SV-1	G-170907-RA-13	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	6.2	(1.6) U	(2.0) U	3.5	38	3.0	(2.0) U	(4.1) U	11	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	(1.6) U	(1.8) U	(3.4) U	3.1	5.6	19	1.7	(4.2) U	5.9	(1.7) U	93	23	(1.6) U	(1.8) U	4.3	2.8	(3.1) U	(1.0) U			
SV-10A	G-170907-RA-01	3.9	4.8	3.7	2.7	(3.2) U	11	15	3.2	5.5	5.5	4.7	18	10	3.6	5.4	4.6	77	4.7	4.6	7.2	16	5.1	4.8	(2.1) U	3.7	2.2	3.3	3.2	5.7	6.8	7.7	23	6.6	5.2	9.4	3.6	31	29	3.0	3.1	9.3	9.0	6.1	1.7			
SV-11A	G-170906-RA-03	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	9.6	(1.6) U	(2.0) U	13	45	1.3	(2.0) U	(4.1) U	16	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	(1.6) U	(1.8) U	(3.4) U	3.5	4.3	12	2.4	(4.2) U	4.0	(1.7) U	49	20	(1.6) U	(1.8) U	10	2.9	(3.1) U	(1.0) U			
SV-12A	G-170906-RA-02	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	(2.4) U	(1.6) U	(2.0) U	(1.6) U	(12) U	(1.3) U	(2.0) U	(4.1) U	2.8	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	(1.6) U	(1.8) U	(3.4) U	(2.0) U	(1.7) U	(3.5) U	2.4	(4.2) U	(1.7) U	(1.7) U	(2.7) U	(1.5) U	(1.6) U	(1.8) U	(2.1) U	(2.2) U	(3.1) U	(1.0) U			
SV-2A	G-170906-RA-06	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	9.3	(1.6) U	(2.0) U	(1.6) U	50	(1.3) U	(2.0) U	(4.1) U	6.7	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	(1.6) U	(1.8) U	(3.4) U	4.9	(1.7) U	(3.5) U	4.6	(4.2) U	(1.7) U	(1.7) U	23	(1.5) U	(1.6) U	(1.8) U	(2.1) U	4.3	(3.1) U	(1.0) U			
SV-2C	G-170906-RA-05	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	6.1	(1.6) U	(2.0) U	1.6	42	1.9	(2.0) U	(4.1) U	27	(5.0) U	(1.4) U	(2.1) U	5.1	(1.7) U	(1.6) U	(1.8) U	(3.4) U	2.8	5.0	9.5	3.3	(4.2) U	(1.7) U	(1.7) U	330	46	(1.6) U	(1.8) U	22	2.4	(3.1) U	(1.0) U			
SV-2D	G-170906-RA-04	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	7.7	(1.6) U	(2.0) U	(1.6) U	40	1.4	(2.0) U	(4.1) U	8.6	(5.0) U	(1.4) U	(2.1) U	8.3	(1.7) U	(1.6) U	(1.8) U	(3.4) U	3.2	(1.7) U	(3.5) U	3.8	(4.2) U	(1.7) U	(1.7) U	81	16	(1.6) U	(1.8) U	18	2.6	(3.1) U	(1.0) U			
SV-4A	G-170907-RA-14	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	(3.9) U	(2.4) U	(1.8) U	(2.8) U	(2.0) U	(2.4) U	(2.4) U	6.0	(1.6) U	(2.0) U	(1.6) U	44	2.6	(2.0) U	(4.1) U	9.9	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	7.4	(1.8) U	(3.4) U	2.4	2.6	4.6	2.1	(4.2) U	(1.7) U	(1.7) U	7.3	31	(1.6) U	(1.8) U	4.9	2.2	(3.1) U	(1.0) U			
SV-4B	G-170907-RA-15	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	6.4	(2.4) U	(1.8) U	(2.8) U	2.0	(2.4) U	(2.4) U	4.0	(1.6) U	2.2	(1.6) U	49	3.3	(2.0) U	(4.1) U	3.2	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	(1.6) U	(1.8) U	(3.4) U	17	3.9	16	1.4	(4.2) U	5.7	(1.7) U	32	17	(1.6) U	(1.8) U	4.5	(2.2) U	(3.1) U	(1.0) U			
SV-4C	G-170907-RA-16	(1.6) U	(2.7) U	(2.2) U	(1.2) U	(3.2) U	6.5	(2.4) U	(1.8) U	(2.8) U	2.1	(2.4) U	(2.4) U	14	(1.6) U	2.5	13	57	3.2	(2.0) U	(4.1) U	25	(5.0) U	(1.4) U	(2.1) U	(1.5) U	(1.7) U	2.2	(1.8) U	(3.4) U	83	7.2	24	2.3	(4.2) U	9.0	3.0	45	37	(1.6) U	(1.8) U	6.8	(2.2) U	(3.1) U	(1.0) U			
SV-4D	G-170907-RA-17	(4.5) U	(7.6) U	(6.0) U	(3.4) U	(8.8) U	(11) U	(6.7) U	(5.1) U	(7.7) U	(5.4) U	(6.7) U	(6.7) U	16	(4.5) U	(5.4) U	7.0	190	5.1	(5.6) U	(11) U	220	(14) U	(3.8) U	(7.3) U	(4.1) U	(4.6) U	(4.4) U	(5.0) U	(9.4) U	42	11	40	7.5	(12) U	14	(4.7) U	49	55	(4.4) U	(5.0) U	15	(6.2) U	(8.5) U	(2.8) U			
SV-5A	G-170907-RA-32	(6.0) U	(10) U	(8.0) U	(4.4) U	(12) U	(14) U	(8.8) U	(6.7) U	(10) U	(7.2) U	(8.8) U	(8.8) U	20	(6.0) U	(7.2) U	(6.0) U	220	(4.7) U	(7.3) U	(15) U	(9.1) U	(18) U	(5.0) U	(7.7) U	(5.																						

Table 6

Analytical Results Summary
 Sampling - Groundwater
 6714 Walker Street
 St. Louis Park, Minnesota

					1,1-Dichloroethene	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	Acetone	Benzene	cis-1,2-Dichloroethene	Cyclohexane	Ethylbenzene	Isopropyl benzene	Naphthalene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes (total)	
	Sample ID	Date			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-1A	W-170817-RA-59	8/17/2017	-	(orig)	(500) U	(500) U	(500) U	(5000) U	(500) U	(500) U	(500) U	(500) U	(500) U	(500) U	14000	(500) U	(500) U	(500) U	(500) U	(500) U	(1000) U
MW-1B	W-170817-RA-58	8/17/2017	-	(orig)	(11) U	(11) U	13	(110) U	50	280	(11) U	22	3.4 J	110	(11) U	(11) U	13	(11) U	59	28	
SV-2	W-170719-RA-13	7/19/2017	(42-46) ft	(orig)	(200) U	(200) UJ	(200) UJ	(2000) U	(200) UJ	(200) U	(200) UJ	(200) UJ	(200) UJ	1100 J	5700	(200) UJ	(200) U	(200) U	(200) U	(200) U	(400) UJ
SV-2	W-170719-RA-14	7/19/2017	(46-50) ft	(orig)	(2000) U	(2000) UJ	(2000) UJ	(20000) U	(2000) UJ	(2000) U	(2000) U	(2000) UJ	(2000) UJ	1600 J	62000	(2000) UJ	(2000) U	(2000) U	(2000) U	(2000) U	(4000) UJ
SV-2	W-170719-RA-15	7/19/2017	(50-54) ft	(orig)	(140) U	(140) UJ	(140) UJ	(1400) U	(140) UJ	(140) U	(140) U	(140) UJ	(140) UJ	(140) UJ	3100	(140) UJ	(140) U	(140) U	(140) U	(140) U	(290) UJ
SV-2	W-170719-RA-17	7/19/2017	(54-58) ft	(orig)	(20) U	(20) UJ	(20) UJ	(200) U	(20) UJ	86	(20) U	(20) UJ	(20) UJ	(20) UJ	610	(20) UJ	14 J	71	(20) U	(40) UJ	
SV-2	W-170719-RA-18	7/19/2017	(58-62) ft	(orig)	(20) U	(20) UJ	(20) UJ	82 J	15 J	25	(20) U	(20) UJ	(20) UJ	6.7 J	660	(20) UJ	8.4 J	21	25	(40) UJ	
SV-4	W-170721-RA-19	7/21/2017	(42-46) ft	(orig)	(1.0) U	(1.0) U	(1.0) U	(10) U	(1.0) U	5.4	(1.0) U	(1.0) U	(1.0) U	(1.0) U	0.86 J	0.30 J	14	12	(1.0) U	(2.0) U	
SV-4	W-170721-RA-20	7/21/2017	(46-50) ft	(orig)	1.5 J	(5.0) U	(5.0) U	(50) U	1.6 J	160	(5.0) U	(5.0) U	(5.0) U	(5.0) U	(5.0) U	(5.0) U	87	(5.0) U	12	(10) U	
SV-4	W-170721-RA-21	7/21/2017	(50-54) ft	(orig)	(8.0) U	(8.0) U	(8.0) U	(80) U	16	240	(8.0) U	(8.0) U	(8.0) U	(8.0) U	(8.0) U	(8.0) U	160	(8.0) U	44	(16) U	
SV-4	W-170721-RA-22	7/21/2017	(54-58) ft	(orig)	(5.0) U	(5.0) U	(5.0) U	(50) U	25	8.0	(5.0) U	3.9 J	2.0 J	41	(5.0) U	(5.0) U	16	(5.0) U	2.4 J	3.4 J	
SV-4	W-170721-RA-23	7/21/2017	(58-62) ft	(orig)	(2.5) U	(2.5) U	(2.5) U	(25) U	48	(2.5) U	(2.5) U	14	3.6	54	(2.5) U	0.88 J	13	(2.5) U	4.4	14	
SV-5	W-170726-RA-32	7/26/2017	(42-46) ft	(orig)	(1.0) U	(1.0) U	(1.0) U	5.7 J	(1.0) U	2.5	(1.0) U	(1.0) U	(1.0) U	(1.0) U	3.8	(1.0) U	3.1	8.4	(1.0) U	(2.0) U	
SV-5	W-170727-RA-33	7/27/2017	(58-62) ft	(orig)	(1.0) U	(1.0) U	(1.0) U	(10) U	24	0.78 J	0.74 J	7.7	2.6	21	8.6	0.69 J	6.5	0.36 J	2.0	8.3	
SV-5	W-170727-RA-39	7/27/2017	(46-50) ft	(orig)	(250) U	(250) U	(250) U	(2500) U	(250) U	(250) U	(250) U	(250) U	(250) U	(250) U	7200	(250) U	(250) U	(250) U	(250) U	(250) U	(500) U
SV-5	W-170727-RA-41	7/27/2017	(50-54) ft	(orig)	(330) U	(330) U	(330) U	(3300) U	(330) U	230 J	(330) U	(330) U	(330) U	(330) U	8600	(330) U	(330) U	210 J	(330) U	(670) U	
SV-5	W-170727-RA-42	7/27/2017	(50-54) ft	(Duplicate)	(330) U	(330) U	(330) U	(3300) U	(330) U	210 J	(330) U	(330) U	(330) U	(330) U	9400	(330) U	(330) U	210 J	(330) U	(670) U	
SV-5	W-170727-RA-43	7/27/2017	(54-58) ft	(orig)	1.9 J	(5.0) U	(5.0) U	(50) U	15	150	(5.0) U	(5.0) U	(5.0) U	47	77	(5.0) U	28	(5.0) U	65	4.3 J	
SV-6	W-170719-RA-07	7/19/2017	(42-46) ft	(orig)	(1.0) U	(1.0) U	(1.0) U	(10) U	(1.0) U	10	(1.0) U	(1.0) U	(1.0) U	(1.0) U	(1.0) U	(1.0) U	23	18	(1.0) U	(2.0) U	
SV-6	W-170719-RA-08	7/19/2017	(46-50) ft	(orig)	1.1 J	(3.3) UJ	(3.3) UJ	(33) U	2.9 J	83	(3.3) U	(3.3) UJ	(3.3) UJ	(3.3) UJ	(3.3) U	(3.3) UJ	43	7.6	4.0	(6.7) UJ	
SV-6	W-170719-RA-09	7/19/2017	(50-54) ft	(orig)	2.4 J	(5.0) UJ	(5.0) UJ	(50) U	6.6 J	150	(5.0) U	(5.0) UJ	(5.0) UJ	(5.0) UJ	(5.0) U	(5.0) UJ	30	(5.0) U	11	(10) UJ	
SV-6	W-170719-RA-10	7/19/2017	(50-54) ft	(Duplicate)	2.3 J	(5.0) UJ	(5.0) UJ	(50) U	6.2 J	140	(5.0) U	(5.0) UJ	(5.0) UJ	(5.0) UJ	(5.0) U	(5.0) UJ	29	(5.0) U	10	(10) UJ	
SV-6	W-170719-RA-11	7/19/2017	(54-58) ft	(orig)	(2.0) U	(2.0) UJ	(2.0) UJ	(20) U	38 J	(2.0) U	(2.0) U	9.9 J	2.4 J	21 J	0.80 J	0.75 J	10	(2.0) U	2.2	11 J	
SV-6	W-170719-RA-12	7/19/2017	(58-62) ft	(orig)	(2.0) U	(2.0) UJ	(2.0) UJ	13 J	48 J	(2.0) U	(2.0) U	12 J	2.6 J	48 J	(2.0) U	0.70 J	21	(2.0) U	5.0	11 J	
SV-7	W-170727-RA-34	7/27/2017	(42-46) ft	(orig)	(6.3) U	(6.3) UJ	(6.3) UJ	(63) U	6.2 J	180	(6.3) U	(6.3) UJ	(6.3) UJ	(6.3) UJ	(6.3) U	(6.3) UJ	110	(6.3) U	23	(13) UJ	
SV-7	W-170727-RA-35	7/27/2017	(46-50) ft	(orig)	(6.3) U	(6.3) UJ	(6.3) UJ	(63) U	15 J	150	(6.3) U	(6.3) UJ	(6.3) UJ	(6.3) UJ	(6.3) U	(6.3) UJ	46	(6.3) U	35	(13) UJ	
SV-7	W-170727-RA-36	7/27/2017	(50-54) ft	(orig)	(1.0) U	(1.0) UJ	(1.0) UJ	2.1 J	1.5 J	5.7	(1.0) U	(1.0) UJ	(1.0) UJ	(1.0) UJ	(1.0) U	0.36 J	8.3	(1.0) U	1.6	(2.0) UJ	
SV-7	W-170727-RA-37	7/27/2017	(54-58) ft	(orig)	(2.5) U	(2.5) UJ	(2.5) UJ	(25) U	45 J	(2.5) U	(2.5) U	11 J	2.7 J	70 J	(2.5) U	0.86 J	11	(2.5) U	2.9	17 J	
SV-7	W-170727-RA-38	7/27/2017	(58-62) ft	(orig)	(2.0) U	(2.0) U	(2.0) U	(20) U	45	22	(2.0) U	11	2.9	58	(2.0) U	0.83 J	21	(2.0) U	34	15	
SV-8	W-170817-RA-56	8/17/2017	(46-50) ft	(orig)	(500) U	(500) U	(500) U	(5000) U	(500) U	(500) U	(500) U	(500) U	(500) U	(500) U	19000	(500) U	(500) U	(500) U	(500) U	(500) U	(1000) U
SV-8	W-170817-RA-57	8/17/2017	(54-58) ft	(orig)	(1300) U	(1300) U	(1300) U	(13000) U	(1300) U	(1300) U	(1300) U	0	(1300) U	(1300) U	31000	(1300) U	(1300) U	(1300) U	(1300) U	(1300) U	(2500) U
SV-9	W-170717-RA-01	7/17/2017	(42-46) ft	(orig)	(5.0) U	(5.0) U	(5.0) U	(50) U	(5.0) U	(5.0) U	(5.0) U	(5.0) U	(5.0) U	(5.0) U	180	(5.0) U	(5.0) U	2.9 J	(5.0) U	(10) U	
SV-9	W-170717-RA-02	7/17/2017	(46-50) ft	(orig)	(100) U	(100) U	(100) U	(1000) U	(100) U	(100) U	(100) U	(100) U	(100) U	(100) U	2400	(100) U	(100) U	(100) U	(100) U	(100) U	(200) U
SV-9	W-170717-RA-03	7/17/2017	(50-54) ft	(orig)	(500) U	(500) U	(500) U	(5000) U	(500) U	(500) U	(500) U	(500) U	(500) U	(500) U	15000	(500) U	(500) U	(500) U	(500) U	(1000) U	
SV-9	W-170717-RA-04	7/17/2017	(54-58) ft	(orig)	(1000) U	(1000) U	(1000) U	(10000) U	(1000) U	(1000) U	(1000) U	(1000) U	(1000) U	(1000) U	16000	(1000) U	(1000) U	(1000) U	(1000) U	(1000) U	(2000) U
SV-9	W-170717-RA-05	7/17/2017	(58-62) ft	(orig)	(2500) U	(2500) U	(2500) U	(25000) U	(2500) U	(2500) U	(2500) U	(2500) U	(2500) U	(2500) U	47000	(2500) U	(2500) U	(2500) U	(2500) U	(2500) U	(5000) U
SV-9	W-170717-RA-06	7/17/2017	(58-62) ft	(Duplicate)	(2500) U	(2500) U	(2500) U	(25000) U	(2500) U	(2500) U	(2500) U	(2500) U	(2500) U	(2500) U	48000	(2500) U	(2500) U	(2500) U	(2500) U	(2500) U	(5000) U
VAP-11	W-170721-RA-25	7/21/2017	(42-46) ft	(orig)	(1.0) U	(1.0) U	(1.0) U	(10) U	(1.0) U	5.0	(1.0) U	(1.0) U	(1.0) U	(1.0) U	10	0.24 J	12	12	(1.0) U	(2.0) U	
VAP-11	W-170721-RA-26	7/21/2017	(46-50) ft	(orig)	(2.0) U	(2.0) U	(2.0) U	(20) U	(2.0) U	36	(2.0) U	(2.0) U	(2.0) U	1.4 J	2.1	(2.0) U	59	17	0.90 J	(4.0) U	
VAP-11	W-170721-RA-28	7/21/2017	(50-54) ft	(orig)	(5.0) U	4.7 J	(5.0) U	(50) U	13	140	(5.0) U	(5.0) U	(5.0) U	6.8	(5.0) U	(5.0) U	71	(5.0) U	34	(10) U	
VAP-11	W-170726-RA-29	7/26/2017	(54-58) ft	(orig)	1.9 J	(6.7) UJ	(6.7) UJ	(67) U	9.0 J	140	(6.7) U	(6.7) UJ	(6.7) UJ	(6.7) UJ	(6.7) U	(6.7) UJ	26	(6.7) U	46	(13) UJ	
VAP-11	W-170726-RA-30	7/26/2017	(63-67) ft	(orig)	(14) U	(14) U	(14) U	(140) U	33	350	(14) U	5.5 J	(14) U	(14) U	(14) U	(14) U	33	(14) U	130	(29) U	
VAP-11	W-170726-RA-31	7/26/2017	(71-75) ft	(orig)	(500) U	(500) UJ	(500) UJ	(5000) U	(500) UJ	8900	(500) U	(500) UJ	(500) UJ	(500) UJ	(500) U	(500) UJ	270 J	(500) U	(500) U	(1000) UJ	

Table 6

Analytical Results Summary
 Sampling - Groundwater
 6714 Walker Street
 St. Louis Park, Minnesota

					1,1-Dichloroethene	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	Acetone	Benzene	cis-1,2-Dichloroethene	Cyclohexane	Ethylbenzene	Isopropyl benzene	Naphthalene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride	Xylenes (total)
	Sample ID	Date			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
VAP-12	W-170803-RA-50	8/3/2017	(42-46) ft	(orig)	(10) U	(10) UJ	(10) UJ	(100) U	(10) UJ	(10) U	(10) U	(10) UJ	(10) UJ	(10) UJ	240	(10) UJ	(10) U	(10) U	(10) U	(20) UJ
VAP-12	W-170803-RA-51	8/3/2017	(46-50) ft	(orig)	(50) U	(50) UJ	(50) UJ	(500) U	(50) UJ	26 J	(50) U	(50) UJ	(50) UJ	(50) UJ	1200	(50) UJ	45 J	17 J	(50) U	(100) UJ
VAP-12	W-170803-RA-52	8/3/2017	(50-54) ft	(orig)	(1000) U	(1000) UJ	(1000) UJ	(10000) U	(1000) UJ	(1000) U	(1000) U	(1000) UJ	(1000) UJ	(1000) UJ	40000	(1000) UJ	(1000) U	(1000) U	(1000) U	(2000) UJ
VAP-12	W-170803-RA-53	8/3/2017	(54-58) ft	(orig)	(13) U	(13) U	(13) U	(130) U	21	380	(13) U	(13) U	(13) U	(13) U	9.6 J	(13) U	63	(13) U	150	(25) U
VAP-12	W-170803-RA-54	8/3/2017	(62-67) ft	(orig)	(2.0) U	(2.0) U	(2.0) U	3.6 J	32	48	(2.0) U	8.8	1.7 J	25	22	0.89 J	7.0	(2.0) U	11	8.1
VAP-12	W-170803-RA-55	8/3/2017	(71-75) ft	(orig)	(130) U	(130) UJ	(130) UJ	(1300) U	(130) UJ	3100	(130) U	(130) UJ	(130) UJ	64 J	550	(130) UJ	84 J	180	200	(250) UJ
VAP-13	W-170801-RA-44	8/1/2017	(42-46) ft	(orig)	(1.0) U	(1.0) UJ	(1.0) UJ	(10) U	(1.0) UJ	1.2	(1.0) U	(1.0) UJ	(1.0) UJ	(1.0) UJ	5.8	(1.0) UJ	2.1	9.0	(1.0) U	(2.0) UJ
VAP-13	W-170801-RA-45	8/1/2017	(46-50) ft	(orig)	(1.0) U	(1.0) UJ	(1.0) UJ	(10) U	(1.0) UJ	19	(1.0) U	(1.0) UJ	(1.0) UJ	(1.0) UJ	11	0.25 J	33	20	(1.0) U	(2.0) UJ
VAP-13	W-170801-RA-46	8/1/2017	(50-54) ft	(orig)	(100) U	(100) U	(100) U	(1000) U	(100) U	100	(100) U	(100) U	(100) U	(100) U	2500	(100) U	77 J	95 J	(100) U	(200) U
VAP-13	W-170801-RA-47	8/1/2017	(54-58) ft	(orig)	(13) U	(13) UJ	(13) UJ	(130) U	15 J	430	(13) U	(13) UJ	(13) UJ	(13) UJ	9.2 J	(13) UJ	86	(13) U	70	(27) UJ
VAP-13	W-170801-RA-48	8/1/2017	(63-67) ft	(orig)	(250) U	(250) U	(250) U	(2500) U	(250) U	(250) U	(250) U	(250) U	(250) U	(250) U	5400	(250) U	(250) U	(250) U	(250) U	(500) U
VAP-13	W-170801-RA-49	8/1/2017	(71-75) ft	(orig)	(50) U	(50) UJ	(50) UJ	(500) U	47 J	1000	(50) U	(50) UJ	(50) UJ	(50) UJ	61	(50) UJ	54	(50) U	170	(100) UJ

Notes:

- U Not detected at the associated reporting limit.
- J Estimated concentration.
- UJ Not detected; associated reporting limit is estimated.

Table 7a

**Groundwater Sample Characterization
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameters	Units	Bulk Water Jug #1	Bulk Water Jug #2	Bulk Water Jug #3
General Chemistry				
pH	S.U.	7.78	-	-
Ammonia-Nitrogen	mg/L	ND (1)	-	-
Orthophosphate-Phosphorus	mg/L	1.88	-	-
Microbiology				
Total Anaerobic Microbial Population	CFU/mL	1.06E+04	-	-
Dehalococcoides (DHC)	Yes/No	-	-	Yes
Volatile Organic Compounds				
cis-1,2-Dichloroethene	µg/L	6.08	6.62	4.2
trans-1,2-Dichloroethene	µg/L	13.7	14.8	8.8
Tetrachloroethene	µg/L	12700	12800	7970
Trichloroethene	µg/L	23.2	30.4	64.2

Notes:

ND (x) - Not detected at reporting limit

S.U. - Standard Units

- - Not applicable

Table 7b

**Initial Soil Sample Characterization
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameters	Units	Bulk Soil
General Chemistry		
pH	S.U.	8.31
Ammonia-Nitrogen	ug/kg	ND (1)
Orthophosphate-Phosphorus	ug/kg	0.52
Microbiology		
Total Anaerobic Microbial Population	CFU/mL	1.36E+04
Dehalococcoides (DHC)	Yes/No	Yes
Volatile Organic Compounds		
cis-1,2-Dichloroethene	ug/kg	ND (50)
trans-1,2-Dichloroethene	ug/kg	ND (50)
Tetrachloroethene	ug/kg	191
Trichloroethene	ug/kg	ND (50)

Notes:

ND (x) - Not detected at reporting limit

S.U. - Standard Units

Table 8

**Treatment of Groundwater with Sodium Hydroxide Catalyzed Sodium Persulfate
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	Control	5% S ₂ O ₈	10% S ₂ O ₈	15% S ₂ O ₈
Loading Rates	g/L	0.00	4.00	8.00	12.0
Volatile Organic Compounds					
cis-1,2-Dichloroethene	µg/L	4.51 / 4.81	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
trans-1,2-Dichloroethene	µg/L	8.01 / 7.89	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
Tetrachloroethene	µg/L	5240 / 5130	25.6 / 123	13.5 / 20.5	5.1 / 4.34
Trichloroethene	µg/L	20.5 / 20.7	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
Amount of NaOH Used	mL	0.00	0.100	0.100	0.100
25% NaOH added 08/30/17	mL	0.00	0.100	0.100	0.100
% Removal of cis-1,2-Dichloroethene			>78	>78	>78
% Removal of trans-1,2-Dichloroethene			>87	>87	>87
% Removal of Tetrachloroethene			98.6	99.7	99.9
% Removal of Trichloroethene			>95	>95	>95

Notes:

ND (x) - Not detected at reporting limit

x/x - Duplicate Analysis

Table 9

**Treatment of Groundwater with PersulfOx
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	Control	5% PersulfOx	10% PersulfOx	15% PersulfOx
Loading Rates	g/L	0.00	4.00	8.00	12.0
Volatile Organic Compounds					
cis-1,2-Dichloroethene	µg/L	4.51 / 4.81	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
trans-1,2-Dichloroethene	µg/L	8.01 / 7.89	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
Tetrachloroethene	µg/L	5240 / 5130	1170 / 1180	514 / 519	221 / 197
Trichloroethene	µg/L	20.5 / 20.7	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
% Removal of cis-1,2-Dichloroethene			>78	>78	>78
% Removal of trans-1,2-Dichloroethene			>87	>87	>87
% Removal of Tetrachloroethene			77.3	90.0	96.0
% Removal of Trichloroethene			>95	>95	>95

Notes:

ND (x) - Not detected at reporting limit

x/x - Duplicate Analysis

Table 10

**Treatment of Soil with Sodium Hydroxide Catalyzed Sodium Persulfate
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	Control	10% S ₂ O ₈	15% S ₂ O ₈	30% S ₂ O ₈
Loading Rates	g/kg	0.00	25.0	37.5	75.0
Volatile Organic Compounds					
cis-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
trans-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Tetrachloroethene	µg/kg	31.2 J / 57	ND (50) / 27.8 J	ND (50) / ND (50)	ND (50) / 26.9 J
Trichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Amount of NaOH Used	mL	0.00	0.100	0.100	0.100
25% NaOH added 08/30/17	mL	0.00	0.100	0.050	0.100
25% NaOH added 09/01/17	mL	0.00	0.000	0.000	0.100
25% NaOH added 09/05/17	mL	0.00	0.100	0.150	0.100
% Removal of Tetrachloroethene			>40	>43	>41

Notes:

ND (x) - Not detected at reporting limit

J - Estimated result

x/x - Duplicate Analysis

Table 11

**Treatment of Soil with PersulfOx
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	Control	10% PersulfOx	15% PersulfOx	30% PersulfOx
Loading Rates	g/kg	0.00	25.0	37.5	75.0
Volatile Organic Compounds					
cis-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)			
trans-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)			
Tetrachloroethene	µg/kg	31.2 J / 57	33.9 J / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Trichloroethene	µg/kg	ND (50) / ND (50)			
% Removal of Tetrachloroethene			>33	>43	>43

Notes:

ND (x) - Not detected at reporting limit

J - Estimated result

x/x - Duplicate Analysis

Table 12

**Biostudy T = 12-Week Analysis
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	T=0	Soil and GW	Soil, GW, EVO, Yeast, and Nutrients	Soil, GW, EVO, Yeast, Nutrients, and Inoculum	Soil, GW, EVO, Yeast, Nutrients, Inoculum, and Azide
Volatile Organic Compounds						
1,1-Dichloroethene	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
cis-1,2-Dichloroethene	µg/L	5.34 / 5.67	5.86 / 6.12	2.66 / 3.08	3.58 / 4.68	17.3 / 14.9
trans-1,2-Dichloroethene	µg/L	8.67 / 9.13	14.2 / 13.9	7.74 / 7.24	7.09 / 9.64	13.6 / 13.6
Tetrachloroethene	µg/L	6680 / 6780	1240 / 1190	ND (2) / ND (2)	ND (2) / ND (2)	1020 / 1010
Trichloroethene	µg/L	26.3 / 27.1	14.3 / 14.3	ND (2) / ND (2)	ND (2) / ND (2)	25 / 20.5
Vinyl Chloride	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	4.24 / 5.02	ND (2) / 2.67	2.17 / ND (2)
Soil						
Volatile Organic Compounds						
1,1-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
cis-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
trans-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Tetrachloroethene	µg/kg	1240 / 888	318 / 323	ND (50) / ND (50)	ND (50) / ND (50)	775 / 720
Trichloroethene	µg/kg	41.9 J / 122	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Vinyl Chloride	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Overall Removal						
% Removal of cis-1,2-Dichloroethene			<1	22.42	11.70	<1
% Removal of trans-1,2-Dichloroethene			<1	9.31	3.53	<1
% Removal of Tetrachloroethene			81.5	>99	>99	82.8
% Removal of Trichloroethene			56.5	>84.6	>84.6	38.5

Notes:

ND (x) - Not detected at reporting limit

J - Estimated result

x/x - Duplicate Analysis

Table 13

**ZVI Biostudy T = 6-Week Analysis
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	T=0	Soil, GW, EOS ZVI, Yeast, and Nutrients	Soil, GW, EHC-L, Yeast, and Nutrients	Soil, GW, EZVI-5, Yeast, and Nutrients	Soil, GW, EHC, Yeast, and Nutrients
Volatile Organic Compounds						
1,1-Dichloroethene	µg/L	ND (2) / ND (2)	4.06 / 5.1	2.53 / 2.41	ND (2) / ND (2)	ND (2) / ND (2)
cis-1,2-Dichloroethene	µg/L	5.56 / 5.38	25.2 / 25.2	784 / 1160	973 / 1010	9.18 / 10.9
trans-1,2-Dichloroethene	µg/L	12.4 / 13.4	2.29 / 2.36	17.1 / 6.49	8.09 / 8.47	6.26 / 3.8
Tetrachloroethene	µg/L	3300 / 3240	581 / 452	4.94 / ND (2)	ND (2) / 2.98	1000 / 1160
Trichloroethene	µg/L	12.9 / 12.8	6.1 / 6.85	2.16 / ND (2)	ND (2) / 2.61	82.2 / 86
Vinyl Chloride	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)	14.6 / 15.5	ND (2) / ND (2)
Soil						
Volatile Organic Compounds						
1,1-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
cis-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	88.4 / 135	202 / 154	ND (50) / ND (50)
trans-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Tetrachloroethene	µg/kg	1400 / 547	3920 / 3950	ND (50) / ND (50)	ND (50) / ND (50)	860 / 814
Trichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	25.6 / ND (50)
Vinyl Chloride	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Overall Removal						
% Removal of cis-1,2-Dichloroethene			<1	<1	<1	<1
% Removal of trans-1,2-Dichloroethene			55.2	5.77	24.1	41.1
% Removal of Tetrachloroethene			57.3	>99	>99	63.3
% Removal of Trichloroethene			33.4	59.0	57.8	<1

Notes:

ND (x) - Not detected at reporting limit

x/x - Duplicate Analysis

Appendices

Appendix A Boring Logs



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: MW-1A
 DATE COMPLETED: February 1, 2016
 DRILLING METHOD: 4 1/4" HSA
 FIELD PERSONNEL: R. Aamot
 MINNESOTA UNIQUE WELL #: 792999

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Monitoring Well	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	
	TOP OF CASING	929.71						
	GROUND SURFACE	927.70						
	Asphalt and gravel backfill	926.20	<p style="text-align: center;">WELL DETAILS</p> <p>Screened interval: 872.70 to 867.70ft 55.00 to 60.00ft BGS Length: 5ft Diameter: 2in Slot Size: 10 Material: Stainless Steel</p> <p>Seal: 879.70 to 877.70ft 48.00 to 50.00ft BGS Material: Bentonite Chips</p> <p>Sand Pack: 877.70 to 867.70ft 50.00 to 60.00ft BGS Material: Sand</p> <p>Seal: 927.70 to 879.70ft 0.00 to 48.00ft BGS Material: Bentonite Grout</p>					
	SM-SAND, silty, with gravel, fine to medium grained, brown to dark brown, dry	923.20						
10	SW-SAND, trace gravel, fine to coarse grained, brown, dry - 6" layer of medium grained sand at 14.0ft BGS							
20								
30								
40	- 6" layer of medium grained sand at 34.0ft BGS - 1' thick gravel layer at 38.0ft BGS							
50	- becoming gray/brown at 54.0ft BGS							
60	- 3" layer of fine gravel at 60.0ft BGS							
70								
80	END OF BOREHOLE @ 80.0ft BGS	848.20						
90	Stratigraphy taken from VAP-2							
100								
110								
120								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▼ STATIC WATER LEVEL ▼

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: MW-1B

PROJECT NUMBER: 088751

DATE COMPLETED: February 2, 2016

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: 4 1/4" HSA

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: R. Aamot

MINNESOTA UNIQUE WELL #: 793000

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Monitoring Well	SAMPLE					
				NUMBER	INTERVAL	REC (ft)	N' VALUE		
	TOP OF CASING	929.70							
	GROUND SURFACE	927.70							
	Asphalt and gravel backfill	926.20	<p style="font-size: small;">Bentonite Grout 2" Riser Pipe</p> <p style="font-size: small;">Bentonite Chips</p> <p style="font-size: small;">Sand Pack Stainless Steel Screen</p>						
	SM-SAND, silty, with gravel, fine to medium grained, brown to dark brown, dry	923.20							
10	SW-SAND, trace gravel, fine to coarse grained, brown, dry								
	- 6" layer of medium grained sand at 14.0ft BGS								
20									
	- 6" layer of medium grained sand at 34.0ft BGS								
	- 1' thick gravel layer at 38.0ft BGS								
40									
	- becoming gray/brown at 54.0ft BGS								
60									
	- 3" layer of fine gravel at 60.0ft BGS								
70									
	- 1" layer of coarse sand at 75.0ft BGS								
	- increasing silt at 78.5ft BGS								
80	END OF BOREHOLE @ 80.0ft BGS	847.70							
90	Stratigraphy taken from VAP-2								
100									
110									
120									

WELL DETAILS
 Screened interval:
 852.70 to 847.70ft
 75.00 to 80.00ft BGS
 Length: 5ft
 Diameter: 2in
 Slot Size: 10
 Material: Stainless Steel
 Seal:
 857.70 to 855.70ft
 70.00 to 72.00ft BGS
 Material: Bentonite Chips
 Sand Pack:
 855.70 to 847.70ft
 72.00 to 80.00ft BGS
 Material: Sand

 Seal:
 927.70 to 857.70ft
 0.00 to 70.00ft BGS
 Material: Bentonite Grout

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▼ STATIC WATER LEVEL ▼

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: SV-1A

PROJECT NUMBER: 088751

DATE COMPLETED: February 6, 2016

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID
	GROUND SURFACE	922.00						
5	Concrete SW-SAND, with gravel, fine to coarse grained, brown, dry	921.50		1	1.5	1.5		1.8
				2	1.5	1.5		1.9
				3	0.0	0.0		-
				4	0.0	0.0		-
10	END OF BOREHOLE @ 10.0ft BGS	912.00	WELL DETAILS Screened interval: 912.50ft 9.50ft BGS Diameter: 0.5in Slot Size: 10 Material: Stainless Steel Seal: 914.00 to 913.00ft 8.00 to 9.00ft BGS Material: Granular Bentonite Sand Pack: 913.00 to 912.00ft 9.00 to 10.00ft BGS Material: Sand ----- Seal: 922.00 to 914.00ft 0.00 to 8.00ft BGS Material: Bentonite Slurry					
15	OilScreenSoil tests were performed every 2.5-feet. DNAPL was not detected in any sample.							
20								
25								
30								
35								
40								
45								
50								
55								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: SV-2 C/D

PROJECT NUMBER: 088751

DATE COMPLETED: July 18, 2017

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID
	GROUND SURFACE	922.00						
2	Concrete	921.00		1	2.0	2.0		0
4	SM-SILTY SAND, with gravel, fine to medium grained, dark brown 10YR3/3, moist -becoming brown 10YR6/3	919.00		2	2.5	2.5		0
6	SW-SAND, trace gravel, fine to coarse grained, brown 10YR6/3	917.50		3	1.5	1.5		0
8				4	2.5	2.5		0
10				5	2.5	2.5		0
12				6	2.5	2.5		0
14				7	2.5	2.5		0
16				8	2.5	2.5		0
18				9	5.0	5.0		0
20	-6" layer of SP-medium grained	903.00		10	2.0	2.0		0
22								
24	-3" gravel layer	898.00						
26								
28								
30								
32								
34	6" layer of SP-medium grained	888.00						
36								
38								
40	-color change to 10YR3/4, saturated	883.00						
42								
44	-12" layer of SP-medium grained	878.00						
46								
48								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ∇
 CHEMICAL ANALYSIS

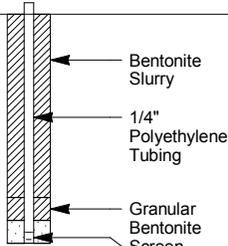
OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: SV-2A
 DATE COMPLETED: February 6, 2016
 DRILLING METHOD: Geoprobe
 FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID
	GROUND SURFACE	922.00						
5	Concrete SM-SAND, silty, with gravel, fine to medium grained, brown, dry	921.50	 <p>WELL DETAILS Screened interval: 912.50 to 912.00ft 9.50 to 10.00ft BGS Length: 0.5ft Diameter: 0.5in Slot Size: 10 Material: Stainless Steel Seal: 914.00 to 913.00ft 8.00 to 9.00ft BGS Material: Granular Bentonite Sand Pack: 913.00 to 912.00ft 9.00 to 10.00ft BGS Material: Sand ----- Seal: 922.00 to 914.00ft 0.00 to 8.00ft BGS Material: Bentonite Slurry</p>	1	921.50 - 921.00	1.0		-
				2	921.00 - 919.50	1.0		1.8
				3	919.50 - 918.00	1.0		2.4
				4	918.00 - 917.00	1.0		2.9
		913.00		5	917.00 - 915.50	1.5		3.9
				6	915.50 - 914.00	1.5		2.4
				7	914.00 - 912.50	1.5		3.2
				8	912.50 - 911.00	1.5		2.2
				9	911.00 - 909.50	1.0		1.0
				10	909.50 - 908.50	1.0		2.3
				11	908.50 - 907.00	1.5		2.4
				12	907.00 - 905.50	1.5		3.5
				13	905.50 - 904.50	1.0		3.4
				14	904.50 - 903.50	1.0		6.0
		885.00		15	903.50 - 902.00	1.5		2.8
				16	902.00 - 899.50	1.5		1.6
		882.00		17	899.50 - 898.00	1.5		3.6
				18	898.00 - 896.50	1.5		2.8
45	END OF BOREHOLE @ 45.0ft BGS	877.00						
50	OilScreenSoil tests were performed every 2.5-feet. DNAPL was not detected in any sample.							
55								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: SV-4 A/B

PROJECT NUMBER: 088751

DATE COMPLETED: April 16, 2016

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE					
				NUMBER	INTERVAL	REC (ft)	N' VALUE		
	GROUND SURFACE	922.00							
2	Concrete	921.00							
4	SW-SAND, with gravel, fine to medium grained, light brown 10YR2/4, dry	918.00							
6	SW-SAND, trace fine gravel, fine to coarse grained, light brown 10YR7/4	916.00							
8	-3" gravel layer	912.00							
10	-3" gravel layer	910.00							
12	-1" dark brown 10YR3/6 layer	910.00							
14		907.00							
16	END OF BOREHOLE @ 15.0ft BGS								
18									
20									
22									
24									
26									
28									
30									
32									
34									
36									
38									
40									
42									
44									
46									
48									

WELL DETAILS
 Screened interval:
 907.50 to 907.00ft
 14.50 to 15.00ft BGS
 Length: 0.5ft
 Material: Stainless Steel
 Seal:
 916.50 to 908.00ft
 5.50 to 14.00ft BGS
 Material: Granular Bentonite
 Sand Pack:
 908.00 to 907.00ft
 14.00 to 15.00ft BGS
 Material: Sand

 Screened interval:
 917.50 to 917.00ft
 4.50 to 5.00ft BGS
 Length: 0.5ft
 Material: Stainless Steel
 Seal:
 921.00 to 918.00ft
 1.00 to 4.00ft BGS
 Material: Granular Bentonite
 Sand Pack:
 916.50 to 918.00ft
 5.50 to 4.00ft BGS
 Material: Sand

 Seal:
 922.00 to 921.00ft
 0.00 to 1.00ft BGS
 Material: Concrete

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ∇

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: SV-4 C/D
 DATE COMPLETED: July 26, 2017
 DRILLING METHOD: Geoprobe
 FIELD PERSONNEL: M. Barnes
 MINNESOTA UNIQUE WELL #: 821499

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID
	GROUND SURFACE	922.00						
2	Concrete	921.00		1	0-1.0	1.0		0
4	SW-SAND, with gravel, fine to medium grained, light brown 10YR2/4, dry	918.00		2	1.0-1.5	1.5		0
6	SW-SAND, trace fine gravel, fine to coarse grained, light brown 10YR7/4	916.00		3	1.5-2.0	2.0		0
8	-3" gravel layer	912.00		4	2.0-2.0	2.0		0
10	-3" gravel layer	910.00		5	2.0-0.0	0.0		NA
12	-1" dark brown 10YR3/6 layer	906.00		6	0.0-1.0	1.0		0
14	-6" light gray 2.5Y7/2	902.00		7	1.0-2.0	2.0		NA
16	-3" gravel layer, becoming moist	898.00		8	2.0-0.5	0.5		0
18	-2" gravel layer, becoming moist	893.00		9	0.5-2.0	2.0		0
20	6" GM-silty gravel, light olive brown 2.5Y5/3	888.00		10	2.0-1.0	1.0		0
22	6" light yellow brown 2.5Y6/3	886.00		11	1.0-0.5	0.5		0
24	-3" gravel layer	883.00		12	0.5-0.0	0.0		NA
26	-saturated							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ∇
 CHEMICAL ANALYSIS

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: SV-4 C/D

PROJECT NUMBER: 088751

DATE COMPLETED: July 26, 2017

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: M. Barnes

MINNESOTA UNIQUE WELL #: 821499

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID
52	12" dark gray 7.5YR3/1 layer	872.00		13	2.0	0		
54		14		1.5	0			
56		15		1.0	0			
58		16		0.0	NA			
60		860.00						
62	END OF BOREHOLE @ 62.0ft BGS							
64	NOTES: SOIL SAMPLES COLLECTED AT 20' WATER SAMPLES COLLECTED AT 42'-46', 46'-50', 50'-54', 54'-58', AND 58'-62'		WELL DETAILS Screened interval: 897.50 to 897.00ft 24.50 to 25.00ft BGS Length: 0.5ft Material: Stainless Steel Seal: 899.00 to 898.00ft 23.00 to 24.00ft BGS Material: Granular Bentonite Sand Pack: 898.00 to 897.00ft 24.00 to 25.00ft BGS Material: Sand ----- Screened interval: 887.50 to 887.00ft 34.50 to 35.00ft BGS Length: 0.5ft Material: Stainless Steel Seal: 889.00 to 888.00ft 33.00 to 34.00ft BGS Material: Granular Bentonite Sand Pack: 888.00 to 887.00ft 34.00 to 35.00ft BGS Material: Sand					
66								
68								
70								
72								
74								
76								
78								
80								
82								
84								
86								
88								
90								
92								
94								
96								
98								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▼
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: SV-5 A/B
 DATE COMPLETED: April 16, 2016
 DRILLING METHOD: Geoprobe
 FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE					
				NUMBER	INTERVAL	REC (ft)	N' VALUE		
	GROUND SURFACE	922.00							
2	Concrete	921.00							
4	SW-SAND, fine to coarse grained, light brownish gray (10YR6/2), dry								
6									
8									
10									
12									
14		908.00							
16	-6" layer of medium grained SP	907.00							
18	END OF BOREHOLE @ 15.0ft BGS								
20									
22									
24									
26									
28									
30									
32									
34									
36									
38									
40									
42									
44									
46									
48									

WELL DETAILS
 Screened interval:
 907.50 to 907.00ft
 14.50 to 15.00ft BGS
 Length: 0.5ft
 Material: Stainless Steel
 Seal:
 916.50 to 908.00ft
 5.50 to 14.00ft BGS
 Material: Granular Bentonite
 Sand Pack:
 908.00 to 907.00ft
 14.00 to 15.00ft BGS
 Material: Sand

 Screened interval:
 917.50 to 917.00ft
 4.50 to 5.00ft BGS
 Length: 0.5ft
 Material: Stainless Steel
 Seal:
 921.00 to 918.00ft
 1.00 to 4.00ft BGS
 Material: Granular Bentonite
 Sand Pack:
 916.50 to 918.00ft
 5.50 to 4.00ft BGS
 Material: Sand

 Seal:
 922.00 to 921.00ft
 0.00 to 1.00ft BGS
 Material: Concrete

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ∇

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: SV-5 C/D
 DATE COMPLETED: July 28, 2017
 DRILLING METHOD: Geoprobe
 FIELD PERSONNEL: R. Aamot
 MINNESOTA UNIQUE WELL #: 821492

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	PID
	GROUND SURFACE	922.00						
2	Concrete	921.00		1	1.0	1.0		0
4	SW-SAND, fine to coarse grained, light brownish gray (10YR6/2), dry			2	2.0	2.0		0
6								
8				3	3.0	3.0		0
10				4	2.0	2.0		0
12				5	0.0	0.0		NA
14	-6" layer of medium grained SP	908.00		6	0.0	0.0		NA
16				7	1.5	1.5		0
18				8	1.0	1.0		0
20				9	0.0	0.0		NA
22			10	1.0	1.0		0	
24								
26								
28								
30								
32								
34	-cobble	888.00						
36								
38								
40	-becoming very dark brown 10YR3/2, saturated	883.00						
42								
44								
46								
48	-3" coarse sand layer	873.00						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ∇

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: SV-6 A/C

PROJECT NUMBER: 088751

DATE COMPLETED: July 20, 2017

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: K. Jenkin

MINNESOTA UNIQUE WELL #: 821498

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID
	GROUND SURFACE	922.00						
2	Concrete	921.50		1	2.0	2.0		1.2
4	SW-SAND, gravelly sand, brown to 1', tan from 1', medium grained, dry, 5YR5/3			2	1.0	1.0		1.2
6	SW-SAND, medium grained with gravel, dry, 10YR4/2	916.00		3	2.0	2.0		1.3
8				4	2.0	2.0		1.2
10	SW-SAND, coarse grained with gravel, dry 7.5YR5/4	912.00		5	4.0	4.0		1.3
12				6	2.0	2.0		1.4
14				7	4.0	4.0		1.3
16				8	4.0	4.0		1.8
18				9	2.0	2.0		1.7
20	SW/SP-SAND, medium grained, trace to with gravel	902.00		10	0.0	0.0		NA
22				11	2.0	2.0		1.8
24								
26								
28								
30								
32								
34								
36								
38	water at 38 feet below ground surface	884.00						
40	-5YR5/6, more red to 39.5	883.50						
42	-10YR5/4	882.50						
44	No Recovery	882.00						
46	SP-SAND, medium grained, 2.5Y4/2	878.00						
48	-coarse grained increasing	874.00						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ∇
 CHEMICAL ANALYSIS

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: SV-6 A/C
 DATE COMPLETED: July 20, 2017
 DRILLING METHOD: Geoprobe
 FIELD PERSONNEL: K. Jenkin
 MINNESOTA UNIQUE WELL #:: 821498

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	PID
52	-4" slightly clayey silt (ML) layer, gray, 2.5Y4/1	871.00	 <p style="margin-left: 20px;">Bentonite Slurry</p>	12	2.0	1.8		
54	SP-SAND, medium grained 2.5Y4/1	870.00		13	1.0	1.5		
56	SW-SAND, medium to coarse grained, 2.5Y4/1	866.00		14	2.0	1.6		
60				15	1.0	1.8		
62	END OF BOREHOLE @ 62.0ft BGS	860.00						
64	NOTES: SOIL SAMPLES COLLECTED AT 51'-52' WATER SAMPLES COLLECTED AT 42'-46', 46'-50', 50'-54', 54'-58', AND 58'-62'		WELL DETAILS Screened interval: 917.50 to 917.00ft 4.50 to 5.00ft BGS Length: 0.5ft Material: Stainless Steel Seal: 919.00 to 918.00ft 3.00 to 4.00ft BGS Material: Granular Bentonite Sand Pack: 918.00 to 916.50ft 4.00 to 5.50ft BGS Material: Sand ----- Screened interval: 897.50 to 897.00ft 24.50 to 25.00ft BGS Length: 0.5ft Material: Stainless Steel Seal: 899.00 to 898.00ft 23.00 to 24.00ft BGS Material: Granular Bentonite Sand Pack: 898.00 to 896.50ft 24.00 to 25.50ft BGS Material: Sand					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▽
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: SV-6 B/D
 DATE COMPLETED: July 20, 2017
 DRILLING METHOD: Geoprobe
 FIELD PERSONNEL: K. Jenkin
 MINNESOTA UNIQUE WELL #: 821498

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID
	GROUND SURFACE	922.00						
2	Concrete	921.50		1	2.0	2.0	1.2	
4	SW-SAND, gravelly, medium grained, brown to 1', tan from 1', dry, 5YR5/3			2	1.0	1.0	1.2	
6	SW-SAND, medium grained with gravel, dry, 10YR4/2	916.00		3	2.0	2.0	1.3	
8				4	2.0	2.0	1.2	
10	SW-SAND, coarse grained with gravel, dry 7.5YR5/4	912.00		5	4.0	4.0	1.3	
12				6	2.0	2.0	1.4	
14				7	4.0	4.0	1.3	
16				8	4.0	4.0	1.8	
18				9	2.0	2.0	1.7	
20	SW/SP-SAND, medium grained, trace to with gravel	902.00		10	0.0	0.0	NA	
22				11	2.0	2.0	1.8	
24								
26								
28								
30								
32								
34								
36								
38	water at 38 feet below ground surface	884.00						
40	-5YR5/6, more red to 39.5	883.50						
42	-10YR5/4	882.50						
44	No Recovery	882.00						
46	SP-SAND, medium grained, 2.5Y4/2	878.00						
48	-coarse grained increasing	874.00						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND
 CHEMICAL ANALYSIS

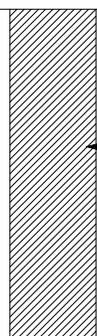
OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: SV-6 B/D
 DATE COMPLETED: July 20, 2017
 DRILLING METHOD: Geoprobe
 FIELD PERSONNEL: K. Jenkin
 MINNESOTA UNIQUE WELL #:: 821498

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	PID
52	-4" slightly clayey silt (ML) layer, gray, 2.5Y4/1	871.00	 <p style="text-align: right; margin-right: 20px;">Bentonite Slurry</p>	12	871.00 - 870.00	2.0		1.8
54	SP-SAND, medium grained 2.5Y4/1	870.00		13	870.00 - 866.00	1.0		1.5
56	SW-SAND, medium to coarse grained, 2.5Y4/1	866.00		14	866.00 - 860.00	2.0		1.6
62	END OF BOREHOLE @ 62.0ft BGS	860.00		15	860.00 - 860.00	1.0		1.8
64	NOTES: SOIL SAMPLES COLLECTED AT 51'-52' WATER SAMPLES COLLECTED AT 42'-46', 46'-50', 50'-54', 54'-58', AND 58'-62'			<p>WELL DETAILS</p> <p>Screened interval: 907.50 to 907.00ft 14.50 to 15.00ft BGS Length: 0.5ft Material: Stainless Steel Seal: 909.00 to 908.00ft 13.00 to 14.00ft BGS Material: Granular Bentonite Sand Pack: 908.00 to 906.50ft 14.00 to 15.50ft BGS Material: Sand</p> <p>Screened interval: 887.50 to 887.00ft 34.50 to 35.00ft BGS Length: 0.5ft Material: Stainless Steel Seal: 889.00 to 888.00ft 33.00 to 34.00ft BGS Material: Granular Bentonite Sand Pack: 888.00 to 886.50ft 34.00 to 35.50ft BGS Material: Sand</p>				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▽
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: SV-7 A/C
 DATE COMPLETED: July 28, 2017
 DRILLING METHOD: Geoprobe
 FIELD PERSONNEL: M. Barnes
 MINNESOTA UNIQUE WELL #: 821296

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	PID
	GROUND SURFACE	922.00						
2	Concrete	921.00		1	0.0 - 1.0	1.0		0
4	SW-SAND, with gravel, fine to medium grained, 10YR6/2, dry			2	1.0 - 1.5	0.5		0
6				3	1.5 - 1.5	0.0		NA
8				4	1.5 - 1.5	2.0		0
10				5	1.5 - 1.5	2.0		0
12	SW-SAND, fine grained with trace gravel, fine to coarse grained	910.00		6	1.5 - 1.5	1.0		0
14				7	1.5 - 1.5	2.0		0
16	-3" gravel layer	907.00		8	1.5 - 1.5	2.0		0
18				9	1.5 - 1.5	2.0		0
20	-3" gravel layer	904.00		10	1.5 - 1.5	1.0		0
22				11	1.5 - 1.5	0.0		NA
24	-3" cobble	898.00		12	1.5 - 1.5	0.0		NA
26	-becoming moist	897.00						
28								
30	-2" cobble	892.00						
32								
34								
36	-12" cobble	887.00						
38								
40	-saturated	883.00						
42								
44								
46								
48								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ∇
 CHEMICAL ANALYSIS

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: SV-7 B/D

PROJECT NUMBER: 088751

DATE COMPLETED: July 28, 2017

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: M. Barnes

MINNESOTA UNIQUE WELL #: 821296

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID
	GROUND SURFACE	922.00						
2	Concrete	921.00		1	0.0	1.0		0
4	SW-SAND, with gravel, fine to medium grained, 10YR6/2, dry			2	0.0	0.5		0
6				3	0.0	0.0		NA
8				4	0.0	2.0		0
10		910.00		5	0.0	2.0		0
12	SW-SAND, fine grained with trace gravel, fine to coarse grained			6	0.0	1.0		0
14	-3" gravel layer	907.00		7	0.0	2.0		0
16	-3" gravel layer	904.00		8	0.0	2.0		0
18				9	0.0	2.0		0
20				10	0.0	1.0		0
22		898.00		11	0.0	0.0		NA
24	-3" cobble	897.00		12	0.0	0.0		NA
26	-becoming moist							
28		892.00						
30	-2" cobble							
32		887.00						
34	-12" cobble							
36		883.00						
38	-saturated							
40								
42								
44								
46								
48								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ∇
 CHEMICAL ANALYSIS

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: SV-8 A/B

PROJECT NUMBER: 088751

DATE COMPLETED: August 17, 2017

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	PID
	GROUND SURFACE	927.40						
2	Asphalt	926.40						
4	SW-SAND, trace gravel, fine to coarse grained, yellow brown 10YR5/4, moist			1	1.0		0	
6				2	1.5		0	
8								
10								
12				3	2.5		0	
14								
16				4	3.0		0	
18								
20								
22	-sandstone cobble	905.40	5	3.0		0		
24								
26			6	3.0		0		
28								
30	-3" layer of gravel	898.40						
32			7	3.0		0		
34	7.5" layer of medium grained SP	893.90						
36								
38	-cobble	890.40	8	3.0		0		
40	-cobble	888.40						
42	-18" gravel layer, dark brown	886.40	9	2.5		0		
44								
46	-sand is becoming dark yellow/brown, 10YR4/6, saturated	883.40						
48			10	2.5		2.8		

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: SV-9 A/C

PROJECT NUMBER: 088751

DATE COMPLETED: July 17, 2017

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	PID
	GROUND SURFACE	926.20						
2	Asphalt and gravel backfill	925.20		1	2.0	2.0		0
4	CL-CLAY, sandy, low plasticity, dark reddish brown (5YR3/2), moist	923.20		2	2.0	2.0		0
6	SM-SAND, silty, gravelly, fine to medium grained, dark reddish brown (5YR3/2), moist	921.20		3	3.0	3.0		0
8	SW-SAND, trace gravel, fine to coarse grained, reddish brown (5YR5/3), moist			4	3.0	3.0		0
10				5	2.5	2.5		0
12				6	1.5	1.5		0
14				7	3.0	3.0		0
16				8	3.0	3.0		0
18				9	3.0	3.0		0
20				10	2.5	2.5		0
24	-cobble	902.20						
26								
28	-cobble	898.20						
30								
32	-12" layer of SP-medium grained	894.20						
34								
36								
38								
40	-6" gravel layer	886.20						
42	-saturated	884.20	▽					
44	6" layer SP-medium grained	882.20						
46								
48	-12" layer of SP-medium grained	878.20						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▽
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: SV-9 B/D

PROJECT NUMBER: 088751

DATE COMPLETED: July 17, 2017

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID
	GROUND SURFACE	926.20						
2	Asphalt and gravel backfill	925.20		1	2.0	2.0		0
4	CL-CLAY, sandy, low plasticity, dark reddish brown (5YR3/2), moist	923.20		2	2.0	2.0		0
6	SM-SAND, silty, gravelly, fine to medium grained, dark reddish brown (5YR3/2), moist	921.20		3	3.0	3.0		0
8	SW-SAND, trace gravel, fine to coarse grained, reddish brown (5YR5/3), moist	921.20		4	3.0	3.0		0
10				5	2.5	2.5		0
12	-cobble	902.20		6	1.5	1.5		0
14				7	3.0	3.0		0
16	--cobble	898.20		8	3.0	3.0		0
18				9	3.0	3.0		0
20	-12" layer of SP-medium grained	894.20		10	2.5	2.5		0
22								
24	-6" gravel layer	886.20						
26	-saturated	884.20						
28	6" layer SP-medium grained	882.20						
30	-12" layer of SP-medium grained	878.20						
32								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND
 CHEMICAL ANALYSIS

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: SVE-1

PROJECT NUMBER: 088751

DATE COMPLETED: April 16, 2016

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Vapor Extraction Well	SAMPLE			
				NUMBER	INTERVAL	REC (ft)	'N' VALUE
	GROUND SURFACE	922.00					
2	Concrete	921.50	<p style="margin-left: 20px;">Bentonite</p> <p style="margin-left: 20px;">Sand Pack</p> <p style="margin-left: 20px;">2" PVC Well Screen</p>				
4	Pea Gravel						
6							
8							
10	Sand	912.00					
12							
14	END OF BOREHOLE @ 13.0ft BGS	909.00					
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

WELL DETAILS
 Screened interval:
 919.00 to 909.00ft
 3.00 to 13.00ft BGS
 Length: 10ft
 Diameter: 2in
 Slot Size: 10
 Material: PVC
 Seal:
 921.50 to 919.50ft
 0.50 to 2.50ft BGS
 Material: Bentonite
 Sand Pack:
 919.50 to 909.00ft
 2.50 to 13.00ft BGS
 Material: Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: SVE-2

PROJECT NUMBER: 088751

DATE COMPLETED: April 16, 2016

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Vapor Extraction Well	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	
	GROUND SURFACE	922.00						
2	Concrete	921.50						
4	SM-SAND, silty, with gravel, fine to medium grained, brown, dry							
6								
8								
10	SW-SAND, trace gravel, fine to coarse grained, brown, dry	913.00						
12								
14	END OF BOREHOLE @ 13.0ft BGS	909.00						
16	Stratigraphy taken from VAP-10		<p><u>WELL DETAILS</u></p> <p>Screened interval: 919.00 to 909.00ft 3.00 to 13.00ft BGS</p> <p>Length: 10ft Diameter: 2in Slot Size: 10 Material: PVC</p> <p>Seal: 921.50 to 919.00ft 0.50 to 3.00ft BGS</p> <p>Material: Bentonite</p> <p>Sand Pack: 919.00 to 909.00ft 3.00 to 13.00ft BGS</p> <p>Material: Sand</p>					
18								
20								
22								
24								
26								
28								
30								
32								
34								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: VAP-11
 DATE COMPLETED: July 20, 2017
 DRILLING METHOD: Geoprobe
 FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Geoprobe Boring	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	PID
	GROUND SURFACE	922.00						
2	Concrete	921.00	 Bentonite Grout	1	2.0	2.0		0
4	Pea Gravel (FILL)-refusal at 8-feet bgs, (concrete)			2	3.0	3.0		0
6				3	2.5	2.5		0
8	Concrete-push through with georobe	914.00		4	3.0	3.0		0
10	SW-SAND, with gravel, fine to coarse grained, yellow/brown 2.5Y6/3, dry	912.00		5	3.0	3.0		0
12				6	3.0	3.0		0
14	-becoming brown 10YR6/3	907.00		7	3.0	3.0		0
16				8	2.5	2.5		0
18				9	3.0	3.0		0
20				10	2.5	2.5		0
22								
24								
26								
28								
30	-12" medium grained SP	893.00						
32	-3" red gravel	891.00						
34								
36								
38								
40	color change to dark brown 10YR3/4, saturated	883.00						
42	-cobble, becoming dark brown 10YR3/4	882.00						
44								
46								
48	-2" clay (CL) layer, medium plasticity, dark gray GLEY1 4/N	875.00						
	-sand becoming dark gray 5Y3/1	873.00						

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND
 CHEMICAL ANALYSIS



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: VAP-11
 DATE COMPLETED: July 20, 2017
 DRILLING METHOD: Geoprobe
 FIELD PERSONNEL: R. Aamot

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Geoprobe Boring	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	PID
52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98	<p style="text-align: center;">-6" layer of SP-medium grained sand</p> <p style="text-align: center;">-becoming coarse grained sand</p> <p>SM-SAND, silty, trace gravel, fine to medium grained, dark gray, 5Y3/1, saturated</p> <p>END OF BOREHOLE @ 75.0ft BGS</p> <p>NOTES: SOIL SAMPLES COLLECTED AT 1'-3.5', 4'-7', 25', 35', 49', 69', AND 74' WATER SAMPLES COLLECTED AT 42'-46', 46'-50', 50'-54', 54'-58', 63'-67', AND 71'-75'</p> <p>OILSCREENSOIL TESTS WERE PERFORMED EVERY 5-FEET. DNAPL WAS NOT DETECTED IN ANY SAMPLE.</p>	<p style="text-align: center;">868.00</p> <p style="text-align: center;">853.00</p> <p style="text-align: center;">848.00</p> <p style="text-align: center;">847.00</p>		<p>WELL DETAILS</p> <p>Seal: 922.00 to 847.00ft 0.00 to 75.00ft BGS</p> <p>Material: Bentonite Grout</p>	<p>11</p> <p>12</p> <p>13</p> <p style="border: 1px solid black; border-radius: 50%; padding: 2px;">14</p> <p style="border: 1px solid black; border-radius: 50%; padding: 2px;">15</p>	<p>3.0</p> <p>2.5</p> <p>2.5</p> <p>3.0</p> <p>2.0</p>	<p>0</p> <p>0</p> <p>0.2</p> <p>10.1</p> <p>42</p>	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▽
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site
 PROJECT NUMBER: 088751
 CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP
 LOCATION: St. Louis Park, Minnesota

HOLE DESIGNATION: VAP-12
 DATE COMPLETED: August 4, 2017
 DRILLING METHOD: Geoprobe
 FIELD PERSONNEL: R. Aamot
 MINNESOTA UNIQUE WELL #: 821493

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	PID
	GROUND SURFACE	922.00						
2	Concrete	921.00	1/4" Poly Tubing	1	0.5			3.0
4	SW-SAND, trace gravel, fine to coarse grained, yellow brown 2.5Y4/3, dry		1/4" Poly Tubing	2	1.5			2.0
6			Bentonite Slurry					
8			2" Diameter Borehole	3	2.5			7.4
10		907.00						
12	-becomes 10YR5/3			4	2.5			6.7
14		902.00						
16	-increasing gravel from 20 to 24 feet			5				6.4
18			Hydrated Bentonite Granules Sand Pack 3/4" Stainless Steel Screen					
20			Bentonite slurry	6				1.3
22								
24		892.50						
26		892.00						
28			Hydrated Bentonite Granules Sand Pack 3/4" Stainless Steel Screen					
30	-Refusal at 30 feet below ground surface. Unable to soil sample below 30 feet.		Bentonite slurry					
32	END OF BOREHOLE @ 30.0ft BGS							
34	NOTES: SOIL SAMPLES COLLECTED AT 1'-3.5', 4'-7', and 25'							
36	WATER SAMPLES COLLECTED AT 42'-46', 46'-50', 50'-54', 54'-58', 63'-67', and 71'-75'							
38	OILSCREENSOIL TESTS WERE PERFORMED EVERY 5-FEET. DNAPL WAS NOT DETECTED IN ANY SAMPLE.							
40								
42								
44								
46								
48			Bentonite slurry					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: VAP-12

PROJECT NUMBER: 088751

DATE COMPLETED: August 4, 2017

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: R. Aamot

MINNESOTA UNIQUE WELL #:: 821493

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Soil Gas Probe	SAMPLE					
				NUMBER	INTERVAL	REC (ft)	N' VALUE	PID	
52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98			 WELL DETAILS Screened interval: 897.50 to 897.00ft 24.50 to 25.00ft BGS Length: 0.5ft Material: Stainless Steel Seal: 899.00 to 898.00ft 23.00 to 24.00ft BGS Material: Granular Bentonite Sand Pack: 898.00 to 897.00ft 24.00 to 25.00ft BGS Material: Sand ----- Screened interval: 887.50 to 887.00ft 34.50 to 35.00ft BGS Length: 0.5ft Material: Stainless Steel Seal: 889.00 to 888.00ft 33.00 to 34.00ft BGS Material: Granular Bentonite Sand Pack: 888.00 to 887.00ft 34.00 to 35.00ft BGS Material: Sand						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS 

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: VAP-13

PROJECT NUMBER: 088751

DATE COMPLETED: August 2, 2017

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: C. Ahrens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Geoprobe Boring	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	'N' VALUE	PID
	GROUND SURFACE	922.00						
2	FILL, pea gravel		<p style="text-align: center;">Bentonite Grout</p>	1	0.3	0.3		0
4				2	0.0	0.0		NA
6				3	0.5	0.5		NA
8				4	2.2	2.2		10.6
10		911.60		5	2.8	2.8		1.2
12	FILL, concrete pieces at 10.4 feet. Insufficient sample for PID reading	911.00		6	2.1	2.1		2.4
14	SP-SAND, mostly fine grained with gravel, light brown 10YR 5/3, dry			7	2.3	2.3		1.4
16				8	2.0	2.0		1.9
18				9	1.8	1.8		0.7
20		900.00		10	0.0	0.0		NA
22	SW-SAND, fine to coarse grained, little fine grained gravel, light brown 10YR 5/3, dry							
24								
26								
28								
30	SP-SAND, fine grained, trace gravel, light brown 10YR 5/3, dry	892.00						
32								
34	GW-GRAVEL, fine to coarse grained, with fine to coarse sand, light brown 10YR 5/3 to red-brown 5YR 4/4 at 37 feet below ground surface	888.00						
36								
38	SP-SAND, fine grained, trace fine gravel, dark brown 10YR 4/2, wet	884.00	▽					
40								
42								
44								
46								
48								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND ▽

CHEMICAL ANALYSIS ○

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17



STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: 6714 Walker Street Site

HOLE DESIGNATION: VAP-13

PROJECT NUMBER: 088751

DATE COMPLETED: August 2, 2017

CLIENT: Daikin Applied Americas Inc. and Super Radiator Coils, LP

DRILLING METHOD: Geoprobe

LOCATION: St. Louis Park, Minnesota

FIELD PERSONNEL: C. Ahrens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft	Geoprobe Boring	SAMPLE				
				NUMBER	INTERVAL	REC (ft)	N' VALUE	PID
52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98	-becoming gray 2.5Y 4/1	872.00		11	11.1	6.2		
				12	0.0	NA		
				13	0.0	NA		
				14	0.0	NA		
	-silt layer, gray-brown 2.5Y 3/1, wet	852.00		15	0.2	3.8		
	END OF BOREHOLE @ 75.0ft BGS	847.00	<u>WELL DETAILS</u> Seal: 922.00 to 847.00ft 0.00 to 75.00ft BGS Material: Bentonite Grout					
	NOTES: SOIL SAMPLES COLLECTED AT 10'-10.5', 15.5'-16', 25'-26', 35'-36', 70'-75' WATER SAMPLES COLLECTED AT 42'-46', 46'-50', 50'-54', 54'-58', 63'-67', and 71'-75' OILSCREENSOIL TESTS WERE PERFORMED EVERY 5-FEET. DNAPL WAS NOT DETECTED IN ANY SAMPLE.							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
 WATER FOUND ▽
 CHEMICAL ANALYSIS ○

OVERBURDEN LOG 088751.GPJ CRA_CORP.GDT 10/18/17

Appendix B

Soil Vapor Sampling Protocols

Appendix B Soil Gas SOPs

Step 1 – Vacuum Test:

- The sampling assembly will be connected to the soil vapor probe valve at the surface casing through a vacuum gauge and then connected to the Summa™ canister through a tee-valve connection leading to a personal sampling pump.
- The personal sampling pump will be used to conduct the vacuum test. The vacuum test will consist of opening the valve to the personal sampling pump leaving closed the valve to the Summa™ canister and the valve to the vapor probe. The pump will then be operated to ensure that it draws no air from the sampling assembly (i.e., creates a negative pressure, or vacuum within the sampling assembly), thus establishing that all assembly connections are air-tight. The sampling pump low-flow detect switch will likely activate with 10 to 15 seconds, turning the pump off.
- If the pump is capable of drawing flow, all fittings and tubing will be checked for tightness (or replaced) and the vacuum test will be repeated.
- The vacuum within the sampling assembly created by the pump should be sustained for at least 1 minute.
- The reading from the vacuum gauge pressure will be recorded in field logbook to demonstrate that the pump was able to create a vacuum within the sampling assembly (it will also be noted whether the low-flow detect switch on the pump was activated and whether the vacuum was sustained for greater than 1 minute).
- The vacuum gauge provided by laboratory will be returned with the canister samples to check residual canister vacuum at the laboratory prior to sample analysis and recorded on the analytical data report.

Step 2 – Tracer Compound (For Soil Vapor Probe Samples only):

- The presence of helium within the sampling assembly will be monitored during purging and soil gas sample collection using a helium meter installed in-line with the sampling assembly just before the personal sampling pump.
- Helium is readily available at a variety of retail businesses, is safe to use, and does not interfere with laboratory analytical method detection limits.
- A containment unit is constructed to cover the soil gas probe surface casing. The containment unit will consist of an overturned plastic pail set into a ring of dry bentonite to create a seal between the ground surface and the rim of the pail. The pail can be set directly on top of the sampling assembly tubing connected to the soil gas probe, which when pressed into the dry bentonite, should create a sufficient seal around the tubing. The pail will have two holes: one to allow for the introduction of helium; and the other to allow for air trapped inside the pail to escape while introducing the helium. The second hole will also allow insertion of the helium meter to measure the helium content within the pail.
- Prior to soil vapor probe purging, helium will be introduced into the containment unit to obtain a minimum 50 percent helium content level. The helium content within the containment unit will be confirmed using the helium meter and recorded in the field logbook. Helium will continue to be introduced to the containment unit during soil gas probe purging and sampling, but care will be taken not to increase the pressure within the containment unit beyond that of atmospheric pressure.

- During soil vapor probe purging and sampling, the helium meter will be connected in-line with the sampling assembly. In the event that the helium meter measures a helium content with the sampling assembly of greater than 10 percent of the source concentration (i.e., 10 percent of the helium content measured within the containment unit), the soil gas probe will be judged to permit significant leakage such that the collected soil gas sample will not be considered reliable and representative of soil gas concentrations within the formation (ITRC, 2007). An advantage of using helium as the tracer compound is that a significant leak can be detected in the field and the cost of analyzing the Summa™ canister can be avoided.

Step 3 – Water Dam Method (For Sub Slab Cox-Colvin Pin Samples only):

- Clean the slab within a 2-inch radius of the VAPOR PIN® to remove dust. Avoid wetting the concrete or wait until the concrete is dry before proceeding and avoid cleaning with VOC-containing substances. A whisk broom or shop vacuum is recommended. Any remaining dust can be picked up with a piece of scrap Play-Doh or modeling clay.
- Roll a 1-inch diameter ball of Play-Doh or modeling clay between your palms to form a “snake” approximately 7 inches long and press it against the end of the pipe couple. Push the couple against the slab to form a seal between the pipe and the concrete.
- Attach the sample tubing to the top of the VAPOR PIN® and pour enough distilled water into the pipe couple to immerse base of the VAPOR PIN®, and if desired, the tubing connection at the top of the VAPOR PIN®.
- Purge the sample point as required by the data quality objectives. Concrete will absorb some of the water, which is normal; however, if water is lost to the sub-slab, stop, remove the water from the couple, and reposition the VAPOR PIN® to stop the leakage. Reseat the leak test equipment, if needed.
- If the VAPOR PIN® is installed in the flush-mount configuration, the larger hole can be filled with water in place of the plastic pipe fitting and Play-Doh or modeling clay.

Appendix C

Laboratory Reports and Data Validation



Memorandum

October 6, 2017

To: Brian Sandberg, GHD

Ref. No.: 088751-40

From: Ruth Mickle/sb/13

612-524-6872

CC: Ryan Aamot, GHD

**Subject: Analytical Results and Reduced Validation
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017**

1. Introduction

The following document details a reduced validation of analytical results for sub-slab, soil vapor and soil vapor extraction samples collected in support of the sampling event at 6714 Walker Street on September 9-15, 2017. Samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica), located in West Sacramento, California. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD Services, Inc. (GHD) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable document entitled:

- i) "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008

Item i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. The samples were prepared and analyzed within the required holding time.



The samples were properly preserved and stored by the laboratory at the required temperature.

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

Laboratory method blanks were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. The surrogate recoveries met the above criteria for investigative samples.

5. Laboratory Control Sample Analyses

LCS and laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS/LCSD contained all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits or outlying percent recoveries and RPD values did not result in qualification, demonstrating acceptable analytical accuracy and precision.

6. Field QA/QC Samples

The field QA/QC consisted of two field duplicate sample sets.



Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, two field duplicate sample sets were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 percent. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value.

Table 4 presents the noncomparable VOC results from the field duplicate sets. The associated sample data were qualified estimated, as noted in the table. The remaining field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

7. Analyte Reporting

The laboratory reported detected results down to the reporting limit (RL). Non-detect results were presented as non-detect at the RL in Table 2.

8. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

Table 1

Sample Collection and Analysis Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Sample Identification	Location	Matrix	Collection (mm/dd/yyyy)	Collection (hr:min)	Analysis/Parameters	Comments
SS-170906-RA-01	SS-2	air	09/06/2017	10:59	VOCs	
SS-170906-RA-02	SS-5	air	09/06/2017	11:05	VOCs	
SS-170906-RA-03	SS-1	air	09/06/2017	12:36	VOCs	
SS-170906-RA-04	SS-4	air	09/06/2017	12:43	VOCs	
SS-170906-RA-05	SS-3	air	09/06/2017	12:58	VOCs	
SS-170906-RA-06	SS-8	air	09/06/2017	10:59	VOCs	
SS-170906-RA-07	SS-9	air	09/06/2017	11:14	VOCs	
SS-170906-RA-08	SS-7	air	09/06/2017	11:18	VOCs	
SS-170906-RA-09	SS-6	air	09/06/2017	12:37	VOCs	
G-170907-RA-11	SV-6C	air	09/07/2017	9:48	VOCs	
G-170907-RA-12	SV-6D	air	09/07/2017	9:48	VOCs	
G-170907-RA-13	SV-1	air	09/07/2017	9:55	VOCs	
G-170907-RA-14	SV-4A	air	09/07/2017	10:33	VOCs	
G-170907-RA-15	SV-4B	air	09/07/2017	10:33	VOCs	
G-170907-RA-16	SV-4C	air	09/07/2017	10:33	VOCs	
G-170907-RA-17	SV-4D	air	09/07/2017	10:37	VOCs	
G-170907-RA-18	SV-7A	air	09/07/2017	10:37	VOCs	
G-170907-RA-19	SV-7B	air	09/07/2017	10:55	VOCs	
G-170907-RA-20	SV-7C	air	09/07/2017	10:56	VOCs	
G-170906-RA-01	SV-10A	air	09/06/2017	12:43	VOCs	
G-170906-RA-02	SV-12A	air	09/06/2017	13:06	VOCs	
G-170906-RA-03	SV-11A	air	09/06/2017	13:29	VOCs	
G-170906-RA-04	SV-2D	air	09/06/2017	14:34	VOCs	
G-170906-RA-05	SV-2C	air	09/06/2017	14:32	VOCs	
G-170906-RA-06	SV-2A	air	09/06/2017	14:49	VOCs	
G-170906-RA-07	VAP-12C	air	09/06/2017	15:15	VOCs	
G-170906-RA-08	VAP-12D	air	09/06/2017	15:14	VOCs	
G-170907-RA-09	SV-6A	air	09/07/2017	9:48	VOCs	
G-170907-RA-10	SV-6B	air	09/07/2017	9:49	VOCs	

Table 1

Sample Collection and Analysis Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Sample Identification	Location	Matrix	Collection (mm/dd/yyyy)	Collection (hr:min)	Analysis/Parameters	Comments
G-170907-RA-21	SV-7D	air	09/07/2017	10:58	VOCs	
G-170907-RA-22	SV-5C	air	09/07/2017	12:26	VOCs	
G-170907-RA-23	SV-5C	air	09/07/2017	12:31	VOCs	field duplicate RA-22
G-170907-RA-24	SV-5D	air	09/07/2017	12:32	VOCs	
G-170907-RA-25	SV-9A	air	09/07/2017	13:24	VOCs	
G-170907-RA-26	SV-9B	air	09/07/2017	13:23	VOCs	
G-170907-RA-27	SV-9C	air	09/07/2017	13:25	VOCs	
G-170907-RA-28	SV-9D	air	09/07/2017	13:24	VOCs	
G-170907-RA-29	SV-8A	air	09/07/2017	13:34	VOCs	
G-170907-RA-30	SV-8A	air	09/07/2017	13:31	VOCs	field duplicate RA-29
G-170907-RA-31	SV-8B	air	09/07/2017	13:32	VOCs	
G-170907-RA-32	SV-5A	air	09/07/2017	12:36	VOCs	
G-170907-RA-33	SV-5B	air	09/07/2017	12:36	VOCs	
SVE-1-170915-RA-01	SVE-1	air	09/15/2017	13:00	VOCs	
SVE-2-170915-RA-02	SVE-2	air	09/15/2017	13:00	VOCs	

Notes:

VOCs - Volatile organic compounds

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SS-1	SS-2	SS-3	SS-4	SS-5	
Sample Name:	SS-170906-RA-03	SS-170906-RA-01	SS-170906-RA-05	SS-170906-RA-04	SS-170906-RA-02	
Sample Date:	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/06/2017	
Parameters	Unit					
Volatile Organic Compounds						
1,1,1-Trichloroethane	ppbv	0.71 U	1.8	0.30 U	2.0 U	0.30 U
1,1,2,2-Tetrachloroethane	ppbv	0.95 U	0.40 U	0.40 U	2.6 U	0.40 U
1,1,2-Trichloroethane	ppbv	0.95 U	0.40 U	0.40 U	2.6 U	0.40 U
1,1-Dichloroethane	ppbv	0.71 U	1.2	0.30 U	2.0 U	0.30 U
1,1-Dichloroethene	ppbv	1.9 U	3.9	0.80 U	5.2 U	0.80 U
1,2,4-Trichlorobenzene	ppbv	4.8 U	2.0 U	2.0 U	13 U	2.0 U
1,2,4-Trimethylbenzene	ppbv	1.9 U	0.80 U	0.80 U	5.2 U	0.80 U
1,2-Dibromoethane (Ethylene dibromide)	ppbv	1.9 U	0.80 U	0.80 U	5.2 U	0.80 U
1,2-Dichlorobenzene	ppbv	0.95 U	0.40 U	0.40 U	2.6 U	0.40 U
1,2-Dichloroethane	ppbv	1.9 U	0.80 U	0.80 U	5.2 U	0.80 U
1,2-Dichloropropane	ppbv	0.95 U	0.44	0.40 U	2.6 U	0.40 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	0.95 U	0.45	0.40 U	2.6 U	0.40 U
1,3,5-Trimethylbenzene	ppbv	0.95 U	0.43	0.40 U	2.6 U	0.40 U
1,3-Dichlorobenzene	ppbv	0.95 U	0.40 U	0.40 U	2.6 U	0.40 U
1,4-Dichlorobenzene	ppbv	0.95 U	0.40 U	0.40 U	2.6 U	0.40 U
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	1.9	2.8	0.80 U	5.2 U	2.9
2-Hexanone	ppbv	0.95 U	0.40 U	0.40 U	2.6 U	0.40 U
4-Ethyl toluene	ppbv	0.95 U	0.48	0.40 U	2.6 U	0.40 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	0.95 U	1.1	0.40 U	2.6 U	2.6
Acetone	ppbv	49	43	23	120	35
Benzene	ppbv	1.0	1.5	0.40 U	2.6 U	0.84
Benzyl chloride	ppbv	1.9 U	0.80 U	0.80 U	5.2 U	0.80 U
Bromodichloromethane	ppbv	0.71 U	0.42	0.30 U	2.0 U	0.30 U
Bromoform	ppbv	0.95 U	0.40 U	0.40 U	2.6 U	0.40 U
Bromomethane (Methyl bromide)	ppbv	1.9 U	0.80 U	0.80 U	5.2 U	0.80 U
Carbon disulfide	ppbv	2.2	12	1.5	5.2 U	2.6
Carbon tetrachloride	ppbv	1.9 U	0.80 U	0.80 U	5.2 U	0.80 U
Chlorobenzene	ppbv	0.71 U	0.40	0.30 U	2.0 U	0.30 U
Chloroethane	ppbv	1.9 U	0.80 U	0.80 U	5.2 U	0.80 U
Chloroform (Trichloromethane)	ppbv	0.71 U	0.53	0.30 U	2.0 U	0.30 U
Chloromethane (Methyl chloride)	ppbv	1.9 U	1.1	0.80 U	5.2 U	0.80 U
cis-1,2-Dichloroethene	ppbv	0.95 U	10	0.40 U	2.6 U	0.74
cis-1,3-Dichloropropene	ppbv	0.95 U	0.44	0.40 U	2.6 U	0.40 U
Dibromochloromethane	ppbv	0.95 U	0.40 U	0.40 U	2.6 U	0.40 U
Dichlorodifluoromethane (CFC-12)	ppbv	0.95 U	0.66	0.40 U	2.6 U	0.41
Ethylbenzene	ppbv	0.95 U	1.3	0.40 U	2.6 U	1.2
Hexachlorobutadiene	ppbv	4.8 U	2.0 U	2.0 U	13 U	2.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SS-1	SS-2	SS-3	SS-4	SS-5	
Sample Name:	SS-170906-RA-03	SS-170906-RA-01	SS-170906-RA-05	SS-170906-RA-04	SS-170906-RA-02	
Sample Date:	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/06/2017	
Parameters	Unit					
m&p-Xylenes	ppbv	2.7	3.6	0.80 U	5.2 U	3.8
Methylene chloride	ppbv	2.2	4.9	1.2	2.6 U	1.0
Naphthalene	ppbv	1.9 U	0.80 U	0.80 U	5.2 U	0.80 U
o-Xylene	ppbv	0.95 U	1.3	0.40 U	2.6 U	1.3
Styrene	ppbv	0.95 U	0.40 U	0.40 U	2.6 U	0.40 U
Tetrachloroethene	ppbv	1.7	2.6	0.40 U	6.1	2.0
Toluene	ppbv	7.6	12	0.40 U	8.3	6.2
trans-1,2-Dichloroethene	ppbv	0.95 U	0.55	0.40 U	2.6 U	0.40 U
trans-1,3-Dichloropropene	ppbv	0.95 U	0.40 U	0.40 U	2.6 U	0.40 U
Trichloroethene	ppbv	0.95 U	2.8	0.40 U	2.6 U	0.63
Trichlorofluoromethane (CFC-11)	ppbv	0.99	1.5	0.46	2.6 U	0.59
Trifluorotrichloroethane (CFC-113)	ppbv	0.95 U	0.59	0.40 U	2.6 U	0.40 U
Vinyl acetate	ppbv	1.9 U	0.80 U	0.80 U	5.2 U	0.80 U
Vinyl chloride	ppbv	0.95 U	1.6	0.40 U	2.6 U	0.40 U
1,1,1-Trichloroethane	µg/m3	3.9 U	10	1.6 U	11 U	1.6 U
1,1,1,2-Tetrachloroethane	µg/m3	6.5 U	2.7 U	2.7 U	18 U	2.7 U
1,1,2-Trichloroethane	µg/m3	5.2 U	2.2 U	2.2 U	14 U	2.2 U
1,1-Dichloroethane	µg/m3	2.9 U	4.7	1.2 U	7.9 U	1.2 U
1,1-Dichloroethene	µg/m3	7.5 U	16	3.2 U	21 U	3.2 U
1,2,4-Trichlorobenzene	µg/m3	35 U	15 U	15 U	97 U	15 U
1,2,4-Trimethylbenzene	µg/m3	9.4 U	3.9 U	3.9 U	26 U	3.9 U
1,2-Dibromoethane (Ethylene dibromide)	µg/m3	15 U	6.1 U	6.1 U	40 U	6.1 U
1,2-Dichlorobenzene	µg/m3	5.7 U	2.4 U	2.4 U	16 U	2.4 U
1,2-Dichloroethane	µg/m3	7.7 U	3.2 U	3.2 U	21 U	3.2 U
1,2-Dichloropropane	µg/m3	4.4 U	2.0	1.8 U	12 U	1.8 U
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m3	6.7 U	3.1	2.8 U	18 U	2.8 U
1,3,5-Trimethylbenzene	µg/m3	4.7 U	2.1	2.0 U	13 U	2.0 U
1,3-Dichlorobenzene	µg/m3	5.7 U	2.4 U	2.4 U	16 U	2.4 U
1,4-Dichlorobenzene	µg/m3	5.7 U	2.4 U	2.4 U	16 U	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m3	5.5	8.2	2.4 U	15 U	8.5
2-Hexanone	µg/m3	3.9 U	1.6 U	1.6 U	11 U	1.6 U
4-Ethyl toluene	µg/m3	4.7 U	2.4	2.0 U	13 U	2.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m3	3.9 U	4.4	1.6 U	11 U	10
Acetone	µg/m3	120	100	54	280	84
Benzene	µg/m3	3.3	4.9	1.3 U	8.4 U	2.7
Benzyl chloride	µg/m3	9.9 U	4.1 U	4.1 U	27 U	4.1 U
Bromodichloromethane	µg/m3	4.8 U	2.8	2.0 U	13 U	2.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SS-1	SS-2	SS-3	SS-4	SS-5	
Sample Name:	SS-170906-RA-03	SS-170906-RA-01	SS-170906-RA-05	SS-170906-RA-04	SS-170906-RA-02	
Sample Date:	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/06/2017	
Parameters	Unit					
Bromoform	µg/m3	9.8 U	4.1 U	4.1 U	27 U	4.1 U
Bromomethane (Methyl bromide)	µg/m3	7.4 U	3.1 U	3.1 U	20 U	3.1 U
Carbon disulfide	µg/m3	6.9	39	4.8	16 U	8.0
Carbon tetrachloride	µg/m3	12 U	5.0 U	5.0 U	33 U	5.0 U
Chlorobenzene	µg/m3	3.3 U	1.8	1.4 U	9.0 U	1.4 U
Chloroethane	µg/m3	5.0 U	2.1 U	2.1 U	14 U	2.1 U
Chloroform (Trichloromethane)	µg/m3	3.5 U	2.6	1.5 U	9.6 U	1.5 U
Chloromethane (Methyl chloride)	µg/m3	3.9 U	2.3	1.7 U	11 U	1.7 U
cis-1,2-Dichloroethene	µg/m3	3.8 U	41	1.6 U	10 U	2.9
cis-1,3-Dichloropropene	µg/m3	4.3 U	2.0	1.8 U	12 U	1.8 U
Dibromochloromethane	µg/m3	8.1 U	3.4 U	3.4 U	22 U	3.4 U
Dichlorodifluoromethane (CFC-12)	µg/m3	4.7 U	3.2	2.0 U	13 U	2.0
Ethylbenzene	µg/m3	4.1 U	5.4	1.7 U	11 U	5.4
Hexachlorobutadiene	µg/m3	51 U	21 U	21 U	140 U	21 U
m&p-Xylenes	µg/m3	12	15	3.5 U	23 U	16
Methylene chloride	µg/m3	7.8	17	4.3	9.1 U	3.5
Naphthalene	µg/m3	10 U	4.2 U	4.2 U	27 U	4.2 U
o-Xylene	µg/m3	4.1 U	5.5	1.7 U	11 U	5.5
Styrene	µg/m3	4.1 U	1.7 U	1.7 U	11 U	1.7 U
Tetrachloroethene	µg/m3	12	18	2.7 U	41	14
Toluene	µg/m3	29	44	1.5 U	31	23
trans-1,2-Dichloroethene	µg/m3	3.8 U	2.2	1.6 U	10 U	1.6 U
trans-1,3-Dichloropropene	µg/m3	4.3 U	1.8 U	1.8 U	12 U	1.8 U
Trichloroethene	µg/m3	5.1 U	15	2.1 U	14 U	3.4
Trichlorofluoromethane (CFC-11)	µg/m3	5.6	8.2	2.6	15 U	3.3
Trifluorotrchloroethane (CFC-113)	µg/m3	7.3 U	4.6	3.1 U	20 U	3.1 U
Vinyl acetate	µg/m3	6.7 U	2.8 U	2.8 U	18 U	2.8 U
Vinyl chloride	µg/m3	2.4 U	4.2	1.0 U	6.7 U	1.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SS-6	SS-7	SS-8	SS-9	SV-1	SV-10A
Sample Name:	SS-170906-RA-09	SS-170906-RA-08	SS-170906-RA-06	SS-170906-RA-07	G-170907-RA-13	G-170906-RA-01
Sample Date:	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/07/2017	09/06/2017
Parameters	Unit					
Volatile Organic Compounds						
1,1,1-Trichloroethane	ppbv	0.30 U	0.30 U	0.30 U	0.30 U	0.71
1,1,2,2-Tetrachloroethane	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.69
1,1,2-Trichloroethane	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.67
1,1-Dichloroethane	ppbv	0.30 U	0.30 U	0.30 U	0.30 U	0.68
1,1-Dichloroethene	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U
1,2,4-Trichlorobenzene	ppbv	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	ppbv	1.0	0.80 U	0.80 U	0.80 U	2.2
1,2-Dibromoethane (Ethylene dibromide)	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U
1,2-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	2.5
1,2-Dichloroethane	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U
1,2-Dichloropropane	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.70
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.79
1,3,5-Trimethylbenzene	ppbv	0.61	0.40 U	0.40 U	0.40 U	1.1
1,3-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.78
1,4-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	3.0
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	2.5	0.88	5.3	2.8	3.5
2-Hexanone	ppbv	0.42	0.40 U	0.40 U	0.40 U	0.89
4-Ethyl toluene	ppbv	1.1	0.40 U	0.40 U	0.40 U	1.1
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	0.92	0.40 U	8.7	0.50	1.1
Acetone	ppbv	24	9.7	19	34	32
Benzene	ppbv	0.78	0.44	0.79	0.46	1.5
Benzyl chloride	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U
Bromodichloromethane	ppbv	0.30 U	0.30 U	0.30 U	0.30 U	0.69
Bromoform	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.69
Bromomethane (Methyl bromide)	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U
Carbon disulfide	ppbv	39	6.1	4.8	2.0	5.3
Carbon tetrachloride	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.82
Chlorobenzene	ppbv	0.30 U	0.30 U	0.30 U	0.30 U	1.0
Chloroethane	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U
Chloroform (Trichloromethane)	ppbv	0.30 U	0.30 U	0.43	0.30 U	0.75
Chloromethane (Methyl chloride)	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	1.1
cis-1,2-Dichloroethene	ppbv	0.40 U	0.40 U	0.40 U	1.1	0.84
cis-1,3-Dichloropropene	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.70
Dibromochloromethane	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.67
Dichlorodifluoromethane (CFC-12)	ppbv	0.53	0.58	0.88	4.8	1.4
Ethylbenzene	ppbv	0.76	0.57	1.6	0.56	1.8
Hexachlorobutadiene	ppbv	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SS-6	SS-7	SS-8	SS-9	SV-1	SV-10A	
Sample Name:	SS-170906-RA-09	SS-170906-RA-08	SS-170906-RA-06	SS-170906-RA-07	G-170907-RA-13	G-170906-RA-01	
Sample Date:	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/07/2017	09/06/2017	
Parameters	Unit						
m&p-Xylenes	ppbv	2.8	1.3	3.9	2.0	4.3	5.2
Methylene chloride	ppbv	3.3	10	6.9	2.0	0.50	1.9
Naphthalene	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.99
o-Xylene	ppbv	1.2	0.42	1.2	0.78	1.3	2.2
Styrene	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.84
Tetrachloroethene	ppbv	80	18	3.1	5.4	14	4.6
Toluene	ppbv	7.0	6.2	11	5.9	6.1	7.7
trans-1,2-Dichloroethene	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.75
trans-1,3-Dichloropropene	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.69
Trichloroethene	ppbv	0.84	1.3	0.76	0.53	0.80	1.7
Trichlorofluoromethane (CFC-11)	ppbv	0.78	0.93	1.0	0.49	0.49	1.6
Trifluorotrchloroethane (CFC-113)	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.79
Vinyl acetate	ppbv	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U	0.80 U
Vinyl chloride	ppbv	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.66
1,1,1-Trichloroethane	µg/m3	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	3.9
1,1,2,2-Tetrachloroethane	µg/m3	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	4.8
1,1,2-Trichloroethane	µg/m3	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	3.7
1,1-Dichloroethane	µg/m3	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	2.7
1,1-Dichloroethene	µg/m3	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U
1,2,4-Trichlorobenzene	µg/m3	15 U	15 U	15 U	15 U	15 U	15 U
1,2,4-Trimethylbenzene	µg/m3	4.9	3.9 U	3.9 U	3.9 U	3.9 U	11
1,2-Dibromoethane (Ethylene dibromide)	µg/m3	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U
1,2-Dichlorobenzene	µg/m3	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	15
1,2-Dichloroethane	µg/m3	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U	3.2 U
1,2-Dichloropropane	µg/m3	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	3.2
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m3	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	5.5
1,3,5-Trimethylbenzene	µg/m3	3.0	2.0 U	2.0 U	2.0 U	2.0 U	5.5
1,3-Dichlorobenzene	µg/m3	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	4.7
1,4-Dichlorobenzene	µg/m3	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	18
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m3	7.3	2.6	16	8.1	6.2	10
2-Hexanone	µg/m3	1.7	1.6 U	1.6 U	1.6 U	1.6 U	3.6
4-Ethyl toluene	µg/m3	5.4	2.0 U	2.0 U	2.0 U	2.0 U	5.4
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m3	3.8	1.6 U	35	2.1	3.5	4.6
Acetone	µg/m3	57	23	44	80	38	77
Benzene	µg/m3	2.5	1.4	2.5	1.5	3.0	4.7
Benzyl chloride	µg/m3	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U	4.1 U
Bromodichloromethane	µg/m3	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	4.6

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SS-6	SS-7	SS-8	SS-9	SV-1	SV-10A
Sample Name:	SS-170906-RA-09	SS-170906-RA-08	SS-170906-RA-06	SS-170906-RA-07	G-170907-RA-13	G-170906-RA-01
Sample Date:	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/07/2017	09/06/2017
Parameters	Unit					
Bromoform	µg/m3	4.1 U	4.1 U	4.1 U	4.1 U	7.2
Bromomethane (Methyl bromide)	µg/m3	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
Carbon disulfide	µg/m3	120	19	15	6.2	16
Carbon tetrachloride	µg/m3	5.0 U	5.0 U	5.0 U	5.0 U	5.1
Chlorobenzene	µg/m3	1.4 U	1.4 U	1.4 U	1.4 U	4.8
Chloroethane	µg/m3	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Chloroform (Trichloromethane)	µg/m3	1.5 U	1.5 U	2.1	1.5 U	3.7
Chloromethane (Methyl chloride)	µg/m3	1.7 U	1.7 U	1.7 U	1.7 U	2.2
cis-1,2-Dichloroethene	µg/m3	1.6 U	1.6 U	1.6 U	4.6	3.3
cis-1,3-Dichloropropene	µg/m3	1.8 U	1.8 U	1.8 U	1.8 U	3.2
Dibromochloromethane	µg/m3	3.4 U	3.4 U	3.4 U	3.4 U	5.7
Dichlorodifluoromethane (CFC-12)	µg/m3	2.6	2.9	4.4	24	6.8
Ethylbenzene	µg/m3	3.3	2.5	6.8	2.4	7.7
Hexachlorobutadiene	µg/m3	21 U	21 U	21 U	21 U	21 U
m&p-Xylenes	µg/m3	12	5.7	17	8.8	23
Methylene chloride	µg/m3	12	36	24	7.1	6.6
Naphthalene	µg/m3	4.2 U	4.2 U	4.2 U	4.2 U	5.2
o-Xylene	µg/m3	5.2	1.8	5.3	3.4	9.4
Styrene	µg/m3	1.7 U	1.7 U	1.7 U	1.7 U	3.6
Tetrachloroethene	µg/m3	540	120	21	37	31
Toluene	µg/m3	27	23	42	22	29
trans-1,2-Dichloroethene	µg/m3	1.6 U	1.6 U	1.6 U	1.6 U	3.0
trans-1,3-Dichloropropene	µg/m3	1.8 U	1.8 U	1.8 U	1.8 U	3.1
Trichloroethene	µg/m3	4.5	6.9	4.1	2.8	9.3
Trichlorofluoromethane (CFC-11)	µg/m3	4.4	5.2	5.8	2.8	9.0
Trifluorotrichloroethane (CFC-113)	µg/m3	3.1 U	3.1 U	3.1 U	3.1 U	6.1
Vinyl acetate	µg/m3	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U
Vinyl chloride	µg/m3	1.0 U	1.0 U	1.0 U	1.0 U	1.7

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-11A	SV-12A	SV-2A	SV-2C	SV-2D	SV-4A
Sample Name:	G-170906-RA-03	G-170906-RA-02	G-170906-RA-06	G-170906-RA-05	G-170906-RA-04	G-170907-RA-14
Sample Date:	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/07/2017

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	ppbv	0.30 U					
1,1,2,2-Tetrachloroethane	ppbv	0.40 U					
1,1,2-Trichloroethane	ppbv	0.40 U					
1,1-Dichloroethane	ppbv	0.30 U					
1,1-Dichloroethene	ppbv	0.80 U					
1,2,4-Trichlorobenzene	ppbv	2.0 U					
1,2,4-Trimethylbenzene	ppbv	0.80 U					
1,2-Dibromoethane (Ethylene dibromide)	ppbv	0.80 U					
1,2-Dichlorobenzene	ppbv	0.40 U					
1,2-Dichloroethane	ppbv	0.80 U					
1,2-Dichloropropane	ppbv	0.40 U					
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	0.40 U					
1,3,5-Trimethylbenzene	ppbv	0.40 U					
1,3-Dichlorobenzene	ppbv	0.40 U					
1,4-Dichlorobenzene	ppbv	0.40 U					
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	3.3	0.80 U	3.2	2.1	2.6	2.0
2-Hexanone	ppbv	0.40 U					
4-Ethyl toluene	ppbv	0.40 U					
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	3.2	0.40 U	0.40 U	0.40	0.40 U	0.40 U
Acetone	ppbv	19	5.0 U	21	18	17	18
Benzene	ppbv	0.42	0.40 U	0.40 U	0.59	0.43	0.80
Benzyl chloride	ppbv	0.80 U					
Bromodichloromethane	ppbv	0.30 U					
Bromoform	ppbv	0.40 U					
Bromomethane (Methyl bromide)	ppbv	0.80 U					
Carbon disulfide	ppbv	5.0	0.89	2.1	8.8	2.8	3.2
Carbon tetrachloride	ppbv	0.80 U					
Chlorobenzene	ppbv	0.30 U					
Chloroethane	ppbv	0.80 U					
Chloroform (Trichloromethane)	ppbv	0.30 U	0.30 U	0.30 U	1.1	1.7	0.30 U
Chloromethane (Methyl chloride)	ppbv	0.80 U					
cis-1,2-Dichloroethene	ppbv	0.40 U	1.9				
cis-1,3-Dichloropropene	ppbv	0.40 U					
Dibromochloromethane	ppbv	0.40 U					
Dichlorodifluoromethane (CFC-12)	ppbv	0.71	0.40 U	1.0	0.56	0.65	0.49
Ethylbenzene	ppbv	0.99	0.40 U	0.40 U	1.1	0.40 U	0.59
Hexachlorobutadiene	ppbv	2.0 U					

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-11A	SV-12A	SV-2A	SV-2C	SV-2D	SV-4A	
Sample Name:	G-170906-RA-03	G-170906-RA-02	G-170906-RA-06	G-170906-RA-05	G-170906-RA-04	G-170907-RA-14	
Sample Date:	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/07/2017	
Parameters	Unit						
m&p-Xylenes	ppbv	2.8	0.80 U	0.80 U	2.2	0.80 U	1.1
Methylene chloride	ppbv	0.69	0.69	1.3	0.94	1.1	0.61
Naphthalene	ppbv	0.80 U	0.80 U				
o-Xylene	ppbv	0.93	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Styrene	ppbv	0.40 U	0.40 U				
Tetrachloroethene	ppbv	7.2	0.40 U	3.3	49	12	1.1
Toluene	ppbv	5.3	0.40 U	0.40 U	12	4.2	8.2
trans-1,2-Dichloroethene	ppbv	0.40 U	0.40 U				
trans-1,3-Dichloropropene	ppbv	0.40 U	0.40 U				
Trichloroethene	ppbv	1.9	0.40 U	0.40 U	4.2	3.3	0.92
Trichlorofluoromethane (CFC-11)	ppbv	0.52	0.40 U	0.77	0.43	0.47	0.40
Trifluorotrichloroethane (CFC-113)	ppbv	0.40 U	0.40 U				
Vinyl acetate	ppbv	0.80 U	0.80 U				
Vinyl chloride	ppbv	0.40 U	0.40 U				
1,1,1-Trichloroethane	µg/m3	1.6 U	1.6 U				
1,1,2,2-Tetrachloroethane	µg/m3	2.7 U	2.7 U				
1,1,2-Trichloroethane	µg/m3	2.2 U	2.2 U				
1,1-Dichloroethane	µg/m3	1.2 U	1.2 U				
1,1-Dichloroethene	µg/m3	3.2 U	3.2 U				
1,2,4-Trichlorobenzene	µg/m3	15 U	15 U				
1,2,4-Trimethylbenzene	µg/m3	3.9 U	3.9 U				
1,2-Dibromoethane (Ethylene dibromide)	µg/m3	6.1 U	6.1 U				
1,2-Dichlorobenzene	µg/m3	2.4 U	2.4 U				
1,2-Dichloroethane	µg/m3	3.2 U	3.2 U				
1,2-Dichloropropane	µg/m3	1.8 U	1.8 U				
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m3	2.8 U	2.8 U				
1,3,5-Trimethylbenzene	µg/m3	2.0 U	2.0 U				
1,3-Dichlorobenzene	µg/m3	2.4 U	2.4 U				
1,4-Dichlorobenzene	µg/m3	2.4 U	2.4 U				
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m3	9.6	2.4 U	9.3	6.1	7.7	6.0
2-Hexanone	µg/m3	1.6 U	1.6 U				
4-Ethyl toluene	µg/m3	2.0 U	2.0 U				
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m3	13	1.6 U	1.6 U	1.6	1.6 U	1.6 U
Acetone	µg/m3	45	12 U	50	42	40	44
Benzene	µg/m3	1.3	1.3 U	1.3 U	1.9	1.4	2.6
Benzyl chloride	µg/m3	4.1 U	4.1 U				
Bromodichloromethane	µg/m3	2.0 U	2.0 U				

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-11A	SV-12A	SV-2A	SV-2C	SV-2D	SV-4A
Sample Name:	G-170906-RA-03	G-170906-RA-02	G-170906-RA-06	G-170906-RA-05	G-170906-RA-04	G-170907-RA-14
Sample Date:	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/06/2017	09/07/2017
Parameters	Unit					
Bromoform	µg/m3	4.1 U				
Bromomethane (Methyl bromide)	µg/m3	3.1 U				
Carbon disulfide	µg/m3	16	2.8	6.7	27	9.9
Carbon tetrachloride	µg/m3	5.0 U				
Chlorobenzene	µg/m3	1.4 U				
Chloroethane	µg/m3	2.1 U				
Chloroform (Trichloromethane)	µg/m3	1.5 U	1.5 U	1.5 U	5.1	1.5 U
Chloromethane (Methyl chloride)	µg/m3	1.7 U				
cis-1,2-Dichloroethene	µg/m3	1.6 U	1.6 U	1.6 U	1.6 U	7.4
cis-1,3-Dichloropropene	µg/m3	1.8 U				
Dibromochloromethane	µg/m3	3.4 U				
Dichlorodifluoromethane (CFC-12)	µg/m3	3.5	2.0 U	4.9	2.8	2.4
Ethylbenzene	µg/m3	4.3	1.7 U	1.7 U	5.0	2.6
Hexachlorobutadiene	µg/m3	21 U				
m&p-Xylenes	µg/m3	12	3.5 U	3.5 U	9.5	4.6
Methylene chloride	µg/m3	2.4	2.4	4.6	3.3	2.1
Naphthalene	µg/m3	4.2 U				
o-Xylene	µg/m3	4.0	1.7 U	1.7 U	1.7 U	1.7 U
Styrene	µg/m3	1.7 U				
Tetrachloroethene	µg/m3	49	2.7 U	23	330	7.3
Toluene	µg/m3	20	1.5 U	1.5 U	46	31
trans-1,2-Dichloroethene	µg/m3	1.6 U				
trans-1,3-Dichloropropene	µg/m3	1.8 U				
Trichloroethene	µg/m3	10	2.1 U	2.1 U	22	4.9
Trichlorofluoromethane (CFC-11)	µg/m3	2.9	2.2 U	4.3	2.4	2.2
Trifluorotrichloroethane (CFC-113)	µg/m3	3.1 U				
Vinyl acetate	µg/m3	2.8 U				
Vinyl chloride	µg/m3	1.0 U				

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-4B	SV-4C	SV-4D	SV-5A	SV-5B	SV-5C
Sample Name:	G-170907-RA-15	G-170907-RA-16	G-170907-RA-17	G-170907-RA-32	G-170907-RA-33	G-170907-RA-22
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	ppbv	0.30 U	0.30 U	0.83 U	1.1 U	0.30 U	0.30 U
1,1,2,2-Tetrachloroethane	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
1,1,2-Trichloroethane	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
1,1-Dichloroethane	ppbv	0.30 U	0.30 U	0.83 U	1.1 U	0.30 U	0.30 U
1,1-Dichloroethene	ppbv	0.80 U	0.80 U	2.2 U	2.9 U	0.80 U	0.80 U
1,2,4-Trichlorobenzene	ppbv	2.0 U	2.0 U	5.5 U	7.3 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	ppbv	1.3	1.3	2.2 U	2.9 U	0.80 U	0.80 U
1,2-Dibromoethane (Ethylene dibromide)	ppbv	0.80 U	0.80 U	2.2 U	2.9 U	0.80 U	0.80 U
1,2-Dichlorobenzene	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
1,2-Dichloroethane	ppbv	0.80 U	0.80 U	2.2 U	2.9 U	0.80 U	0.80 U
1,2-Dichloropropane	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
1,3,5-Trimethylbenzene	ppbv	0.40	0.44	1.1 U	1.5 U	0.40 U	0.40 U
1,3-Dichlorobenzene	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
1,4-Dichlorobenzene	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	1.3	4.7	5.6	6.7	0.80 U	0.80 U
2-Hexanone	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
4-Ethyl toluene	ppbv	0.45	0.52	1.1 U	1.5 U	0.40 U	0.40 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	0.40 U	3.2	1.7	1.5 U	0.40 U	0.40 U
Acetone	ppbv	21	24	79	91	5.0 U	18 J
Benzene	ppbv	1.0	1.0	1.6	1.5 U	0.40 U	0.40 U
Benzyl chloride	ppbv	0.80 U	0.80 U	2.2 U	2.9 U	0.80 U	0.80 U
Bromodichloromethane	ppbv	0.30 U	0.30 U	0.83 U	1.1 U	0.30 U	0.30 U
Bromoform	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
Bromomethane (Methyl bromide)	ppbv	0.80 U	0.80 U	2.2 U	2.9 U	0.80 U	0.80 U
Carbon disulfide	ppbv	1.0	8.1	70	2.9 U	1.5	1.6 J
Carbon tetrachloride	ppbv	0.80 U	0.80 U	2.2 U	2.9 U	0.80 U	0.80 U
Chlorobenzene	ppbv	0.30 U	0.30 U	0.83 U	1.1 U	0.30 U	0.30 U
Chloroethane	ppbv	0.80 U	0.80 U	2.2 U	2.9 U	0.80 U	0.80 U
Chloroform (Trichloromethane)	ppbv	0.30 U	0.30 U	0.83 U	1.1 U	0.30 U	0.30 U
Chloromethane (Methyl chloride)	ppbv	0.80 U	0.80 U	2.2 U	2.9 U	0.80 U	0.80 U
cis-1,2-Dichloroethene	ppbv	0.40 U	0.54	1.1 U	1.5 U	0.40 U	0.40 U
cis-1,3-Dichloropropene	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
Dibromochloromethane	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
Dichlorodifluoromethane (CFC-12)	ppbv	3.4	17	8.6	1.5 U	29	11 J
Ethylbenzene	ppbv	0.90	1.7	2.6	1.5 U	0.42	0.40 U
Hexachlorobutadiene	ppbv	2.0 U	2.0 U	5.5 U	7.3 U	2.0 U	2.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-4B	SV-4C	SV-4D	SV-5A	SV-5B	SV-5C	
Sample Name:	G-170907-RA-15	G-170907-RA-16	G-170907-RA-17	G-170907-RA-32	G-170907-RA-33	G-170907-RA-22	
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	
Parameters	Unit						
m&p-Xylenes	ppbv	3.6	5.5	9.2	4.7	0.90	0.80 U
Methylene chloride	ppbv	0.40	0.67	2.1	1.5 U	1.2	0.40 U
Naphthalene	ppbv	0.80 U	0.80 U	2.2 U	2.9 U	0.80 U	0.80 U
o-Xylene	ppbv	1.3	2.1	3.2	1.6	0.40 U	0.40 U
Styrene	ppbv	0.40 U	0.70	1.1 U	1.5 U	0.40 U	0.40 U
Tetrachloroethene	ppbv	4.8	6.7	7.3	4.5	29	0.53 J
Toluene	ppbv	4.5	9.8	15	9.2	3.2	0.87
trans-1,2-Dichloroethene	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
trans-1,3-Dichloropropene	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
Trichloroethene	ppbv	0.83	1.3	2.7	1.5 U	0.68	0.40 UJ
Trichlorofluoromethane (CFC-11)	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.60	0.40 U
Trifluorotrchloroethane (CFC-113)	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
Vinyl acetate	ppbv	0.80 U	0.80 U	2.2 U	2.9 U	0.80 U	0.80 U
Vinyl chloride	ppbv	0.40 U	0.40 U	1.1 U	1.5 U	0.40 U	0.40 U
1,1,1-Trichloroethane	µg/m3	1.6 U	1.6 U	4.5 U	6.0 U	1.6 U	1.6 U
1,1,2,2-Tetrachloroethane	µg/m3	2.7 U	2.7 U	7.6 U	10 U	2.7 U	2.7 U
1,1,2-Trichloroethane	µg/m3	2.2 U	2.2 U	6.0 U	8.0 U	2.2 U	2.2 U
1,1-Dichloroethane	µg/m3	1.2 U	1.2 U	3.4 U	4.4 U	1.2 U	1.2 U
1,1-Dichloroethene	µg/m3	3.2 U	3.2 U	8.8 U	12 U	3.2 U	3.2 U
1,2,4-Trichlorobenzene	µg/m3	15 U	15 U	41 U	54 U	15 U	15 U
1,2,4-Trimethylbenzene	µg/m3	6.4	6.5	11 U	14 U	3.9 U	3.9 U
1,2-Dibromoethane (Ethylene dibromide)	µg/m3	6.1 U	6.1 U	17 U	22 U	6.1 U	6.1 U
1,2-Dichlorobenzene	µg/m3	2.4 U	2.4 U	6.7 U	8.8 U	2.4 U	2.4 U
1,2-Dichloroethane	µg/m3	3.2 U	3.2 U	9.0 U	12 U	3.2 U	3.2 U
1,2-Dichloropropane	µg/m3	1.8 U	1.8 U	5.1 U	6.7 U	1.8 U	1.8 U
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m3	2.8 U	2.8 U	7.7 U	10 U	2.8 U	2.8 U
1,3,5-Trimethylbenzene	µg/m3	2.0	2.1	5.4 U	7.2 U	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/m3	2.4 U	2.4 U	6.7 U	8.8 U	2.4 U	2.4 U
1,4-Dichlorobenzene	µg/m3	2.4 U	2.4 U	6.7 U	8.8 U	2.4 U	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m3	4.0	14	16	20	2.4 U	2.4 U
2-Hexanone	µg/m3	1.6 U	1.6 U	4.5 U	6.0 U	1.6 U	1.6 U
4-Ethyl toluene	µg/m3	2.2	2.5	5.4 U	7.2 U	2.0 U	2.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m3	1.6 U	13	7.0	6.0 U	1.6 U	1.6 U
Acetone	µg/m3	49	57	190	220	12 U	43 J
Benzene	µg/m3	3.3	3.2	5.1	4.7 U	1.3 U	1.3 U
Benzyl chloride	µg/m3	4.1 U	4.1 U	11 U	15 U	4.1 U	4.1 U
Bromodichloromethane	µg/m3	2.0 U	2.0 U	5.6 U	7.3 U	2.0 U	2.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-4B	SV-4C	SV-4D	SV-5A	SV-5B	SV-5C	
Sample Name:	G-170907-RA-15	G-170907-RA-16	G-170907-RA-17	G-170907-RA-32	G-170907-RA-33	G-170907-RA-22	
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	
Parameters	Unit						
Bromoform	µg/m3	4.1 U	4.1 U	11 U	15 U	4.1 U	4.1 U
Bromomethane (Methyl bromide)	µg/m3	3.1 U	3.1 U	8.6 U	11 U	3.1 U	3.1 U
Carbon disulfide	µg/m3	3.2	25	220	9.1 U	4.8	5.0 J
Carbon tetrachloride	µg/m3	5.0 U	5.0 U	14 U	18 U	5.0 U	5.0 U
Chlorobenzene	µg/m3	1.4 U	1.4 U	3.8 U	5.0 U	1.4 U	1.4 U
Chloroethane	µg/m3	2.1 U	2.1 U	5.8 U	7.7 U	2.1 U	2.1 U
Chloroform (Trichloromethane)	µg/m3	1.5 U	1.5 U	4.1 U	5.3 U	1.5 U	1.5 U
Chloromethane (Methyl chloride)	µg/m3	1.7 U	1.7 U	4.6 U	6.0 U	1.7 U	1.7 U
cis-1,2-Dichloroethene	µg/m3	1.6 U	2.2	4.4 U	5.8 U	1.6 U	1.6 U
cis-1,3-Dichloropropene	µg/m3	1.8 U	1.8 U	5.0 U	6.6 U	1.8 U	1.8 U
Dibromochloromethane	µg/m3	3.4 U	3.4 U	9.4 U	12 U	3.4 U	3.4 U
Dichlorodifluoromethane (CFC-12)	µg/m3	17	83	42	7.2 U	140	54 J
Ethylbenzene	µg/m3	3.9	7.2	11	6.3 U	1.8	1.7 U
Hexachlorobutadiene	µg/m3	21 U	21 U	59 U	78 U	21 U	21 U
m&p-Xylenes	µg/m3	16	24	40	20	3.9	3.5 U
Methylene chloride	µg/m3	1.4	2.3	7.5	5.1 U	4.0	1.4 U
Naphthalene	µg/m3	4.2 U	4.2 U	12 U	15 U	4.2 U	4.2 U
o-Xylene	µg/m3	5.7	9.0	14	7.0	1.7 U	1.7 U
Styrene	µg/m3	1.7 U	3.0	4.7 U	6.2 U	1.7 U	1.7 U
Tetrachloroethene	µg/m3	32	45	49	31	200	3.6 J
Toluene	µg/m3	17	37	55	35	12	3.3
trans-1,2-Dichloroethene	µg/m3	1.6 U	1.6 U	4.4 U	5.8 U	1.6 U	1.6 U
trans-1,3-Dichloropropene	µg/m3	1.8 U	1.8 U	5.0 U	6.6 U	1.8 U	1.8 U
Trichloroethene	µg/m3	4.5	6.8	15	7.8 U	3.7	2.1 UJ
Trichlorofluoromethane (CFC-11)	µg/m3	2.2 U	2.2 U	6.2 U	8.2 U	3.4	2.2 U
Trifluorotrichloroethane (CFC-113)	µg/m3	3.1 U	3.1 U	8.5 U	11 U	3.1 U	3.1 U
Vinyl acetate	µg/m3	2.8 U	2.8 U	7.8 U	10 U	2.8 U	2.8 U
Vinyl chloride	µg/m3	1.0 U	1.0 U	2.8 U	3.7 U	1.0 U	1.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-5C	SV-5D	SV-6A	SV-6B	SV-6C	SV-6D
Sample Name:	G-170907-RA-23	G-170907-RA-24	G-170907-RA-09	G-170907-RA-10	G-170907-RA-11	G-170907-RA-12
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017
	Duplicate					
Parameters	Unit					
Volatile Organic Compounds						
1,1,1-Trichloroethane	ppbv	0.30 U	0.30 U	0.39 U	0.30 U	0.30 U
1,1,1,2-Tetrachloroethane	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U
1,1,2-Trichloroethane	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U
1,1-Dichloroethane	ppbv	0.30 U	0.30 U	0.39 U	0.30 U	0.30 U
1,1-Dichloroethene	ppbv	0.80 U	0.80 U	1.0 U	0.80 U	0.80 U
1,2,4-Trichlorobenzene	ppbv	2.0 U	2.0 U	2.6 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	ppbv	0.80 U	0.80 U	1.0 U	1.1	0.80 U
1,2-Dibromoethane (Ethylene dibromide)	ppbv	0.80 U	0.80 U	1.0 U	0.80 U	0.80 U
1,2-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U
1,2-Dichloroethane	ppbv	0.80 U	0.80 U	1.0 U	0.80 U	0.80 U
1,2-Dichloropropane	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U
1,3,5-Trimethylbenzene	ppbv	0.40 U	0.40 U	0.52 U	0.42	0.40 U
1,3-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U
1,4-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	1.1	1.0	3.0	1.5	0.83
2-Hexanone	ppbv	0.40 U	0.40 U	0.52 U	0.42	0.40 U
4-Ethyl toluene	ppbv	0.40 U	0.40 U	0.52 U	0.52	0.40 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	0.43	0.40 U	1.1	0.78	0.40 U
Acetone	ppbv	9.7 J	11	14	16	6.7
Benzene	ppbv	0.40 U	0.40 U	0.52 U	0.73	0.40 U
Benzyl chloride	ppbv	0.80 U	0.80 U	1.0 U	0.80 U	0.80 U
Bromodichloromethane	ppbv	0.30 U	0.30 U	0.39 U	0.30 U	0.30 U
Bromoform	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U
Bromomethane (Methyl bromide)	ppbv	0.80 U	0.80 U	1.0 U	0.80 U	0.80 U
Carbon disulfide	ppbv	4.3 J	27	3.8	18	5.9
Carbon tetrachloride	ppbv	0.80 U	0.80 U	1.0 U	0.80 U	0.80 U
Chlorobenzene	ppbv	0.30 U	0.30 U	0.39 U	0.30 U	0.30 U
Chloroethane	ppbv	0.80 U	0.80 U	1.0 U	0.80 U	0.80 U
Chloroform (Trichloromethane)	ppbv	0.56	0.59	0.39 U	0.30 U	0.30 U
Chloromethane (Methyl chloride)	ppbv	0.80 U	0.80 U	1.0 U	0.80 U	0.80 U
cis-1,2-Dichloroethene	ppbv	0.40 U	0.44	0.52 U	0.40 U	0.40 U
cis-1,3-Dichloropropene	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U
Dibromochloromethane	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U
Dichlorodifluoromethane (CFC-12)	ppbv	41 J	15	0.58	7.7	6.7
Ethylbenzene	ppbv	0.40 U	0.79	0.52 U	1.8	0.57
Hexachlorobutadiene	ppbv	2.0 U	2.0 U	2.6 U	2.0 U	2.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-5C	SV-5D	SV-6A	SV-6B	SV-6C	SV-6D	
Sample Name:	G-170907-RA-23	G-170907-RA-24	G-170907-RA-09	G-170907-RA-10	G-170907-RA-11	G-170907-RA-12	
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	
	Duplicate						
Parameters	Unit						
m&p-Xylenes	ppbv	0.80 U	1.4	1.0 U	6.5	1.5	2.2
Methylene chloride	ppbv	0.54	0.62	0.76	0.40 U	0.40 U	0.40 U
Naphthalene	ppbv	0.80 U	0.80 U	1.0 U	0.80 U	0.80 U	0.80 U
o-Xylene	ppbv	0.40 U	0.52	0.52 U	2.3	0.42	0.98
Styrene	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U	0.40 U
Tetrachloroethene	ppbv	26 J	44	36	42	20	29
Toluene	ppbv	0.50	2.9	2.9	6.8	2.8	2.5
trans-1,2-Dichloroethene	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U	0.40 U
trans-1,3-Dichloropropene	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U	0.40 U
Trichloroethene	ppbv	3.7 J	1.4	0.64	2.4	1.1	0.86
Trichlorofluoromethane (CFC-11)	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U	0.40 U
Trifluorotrichloroethane (CFC-113)	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U	0.40 U
Vinyl acetate	ppbv	0.80 U	0.80 U	1.0 U	0.80 U	0.80 U	0.80 U
Vinyl chloride	ppbv	0.40 U	0.40 U	0.52 U	0.40 U	0.40 U	0.40 U
1,1,1-Trichloroethane	µg/m3	1.6 U	1.6 U	2.1 U	1.6 U	1.6 U	1.6 U
1,1,2,2-Tetrachloroethane	µg/m3	2.7 U	2.7 U	3.6 U	2.7 U	2.7 U	2.7 U
1,1,2-Trichloroethane	µg/m3	2.2 U	2.2 U	2.8 U	2.2 U	2.2 U	2.2 U
1,1-Dichloroethane	µg/m3	1.2 U	1.2 U	1.6 U	1.2 U	1.2 U	1.2 U
1,1-Dichloroethene	µg/m3	3.2 U	3.2 U	4.1 U	3.2 U	3.2 U	3.2 U
1,2,4-Trichlorobenzene	µg/m3	15 U	15 U	19 U	15 U	15 U	15 U
1,2,4-Trimethylbenzene	µg/m3	3.9 U	3.9 U	5.1 U	5.5	3.9 U	3.9 U
1,2-Dibromoethane (Ethylene dibromide)	µg/m3	6.1 U	6.1 U	8.0 U	6.1 U	6.1 U	6.1 U
1,2-Dichlorobenzene	µg/m3	2.4 U	2.4 U	3.1 U	2.4 U	2.4 U	2.4 U
1,2-Dichloroethane	µg/m3	3.2 U	3.2 U	4.2 U	3.2 U	3.2 U	3.2 U
1,2-Dichloropropane	µg/m3	1.8 U	1.8 U	2.4 U	1.8 U	1.8 U	1.8 U
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m3	2.8 U	2.8 U	3.6 U	2.8 U	2.8 U	2.8 U
1,3,5-Trimethylbenzene	µg/m3	2.0 U	2.0 U	2.6 U	2.1	2.0 U	2.0 U
1,3-Dichlorobenzene	µg/m3	2.4 U	2.4 U	3.1 U	2.4 U	2.4 U	2.4 U
1,4-Dichlorobenzene	µg/m3	2.4 U	2.4 U	3.1 U	2.4 U	2.4 U	2.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m3	3.1	3.1	8.8	4.4	2.4	6.6
2-Hexanone	µg/m3	1.6 U	1.6 U	2.1 U	1.7	1.6 U	2.4
4-Ethyl toluene	µg/m3	2.0 U	2.0 U	2.6 U	2.6	2.0 U	2.0 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m3	1.8	1.6 U	4.5	3.2	1.6 U	1.6 U
Acetone	µg/m3	23 J	25	33	39	16	31
Benzene	µg/m3	1.3 U	1.3 U	1.7 U	2.3	1.3 U	1.4
Benzyl chloride	µg/m3	4.1 U	4.1 U	5.4 U	4.1 U	4.1 U	4.1 U
Bromodichloromethane	µg/m3	2.0 U	2.0 U	2.6 U	2.0 U	2.0 U	2.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-5C	SV-5D	SV-6A	SV-6B	SV-6C	SV-6D
Sample Name:	G-170907-RA-23	G-170907-RA-24	G-170907-RA-09	G-170907-RA-10	G-170907-RA-11	G-170907-RA-12
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017
	Duplicate					
Parameters	Unit					
Bromoform	µg/m3	4.1 U	4.1 U	5.4 U	4.1 U	4.1 U
Bromomethane (Methyl bromide)	µg/m3	3.1 U	3.1 U	4.0 U	3.1 U	3.1 U
Carbon disulfide	µg/m3	13 J	85	12	55	35
Carbon tetrachloride	µg/m3	5.0 U	5.0 U	6.5 U	5.0 U	5.0 U
Chlorobenzene	µg/m3	1.4 U	1.4 U	1.8 U	1.4 U	1.4 U
Chloroethane	µg/m3	2.1 U	2.1 U	2.7 U	2.1 U	2.1 U
Chloroform (Trichloromethane)	µg/m3	2.8	2.9	1.9 U	1.5 U	1.5 U
Chloromethane (Methyl chloride)	µg/m3	1.7 U	1.7 U	2.1 U	1.7 U	1.7 U
cis-1,2-Dichloroethene	µg/m3	1.6 U	1.7	2.1 U	1.6 U	1.6 U
cis-1,3-Dichloropropene	µg/m3	1.8 U	1.8 U	2.4 U	1.8 U	1.8 U
Dibromochloromethane	µg/m3	3.4 U	3.4 U	4.4 U	3.4 U	3.4 U
Dichlorodifluoromethane (CFC-12)	µg/m3	200 J	73	2.9	38	76
Ethylbenzene	µg/m3	1.7 U	3.4	2.3 U	7.9	3.3
Hexachlorobutadiene	µg/m3	21 U	21 U	28 U	21 U	21 U
m&p-Xylenes	µg/m3	3.5 U	6.2	4.5 U	28	9.5
Methylene chloride	µg/m3	1.9	2.1	2.6	1.4 U	1.4 U
Naphthalene	µg/m3	4.2 U	4.2 U	5.5 U	4.2 U	4.2 U
o-Xylene	µg/m3	1.7 U	2.3	2.3 U	10	4.2
Styrene	µg/m3	1.7 U	1.7 U	2.2 U	1.7 U	1.7 U
Tetrachloroethene	µg/m3	170 J	300	240	290	200
Toluene	µg/m3	1.9	11	11	26	9.4
trans-1,2-Dichloroethene	µg/m3	1.6 U	1.6 U	2.1 U	1.6 U	1.6 U
trans-1,3-Dichloropropene	µg/m3	1.8 U	1.8 U	2.4 U	1.8 U	1.8 U
Trichloroethene	µg/m3	20 J	7.4	3.4	13	4.6
Trichlorofluoromethane (CFC-11)	µg/m3	2.2 U	2.2 U	2.9 U	2.2 U	2.2 U
Trifluorotrichloroethane (CFC-113)	µg/m3	3.1 U	3.1 U	4.0 U	3.1 U	3.1 U
Vinyl acetate	µg/m3	2.8 U	2.8 U	3.7 U	2.8 U	2.8 U
Vinyl chloride	µg/m3	1.0 U	1.0 U	1.3 U	1.0 U	1.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-7A	SV-7B	SV-7C	SV-7D	SV-8A	SV-8A	
Sample Name:	G-170907-RA-18	G-170907-RA-19	G-170907-RA-20	G-170907-RA-21	G-170907-RA-29	G-170907-RA-30	
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017 Duplicate	
Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	ppbv	0.30 U	0.30 U	0.30 U	0.39 U	0.68 U	0.65 U
1,1,2,2-Tetrachloroethane	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
1,1,2-Trichloroethane	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
1,1-Dichloroethane	ppbv	0.30 U	0.30 U	0.30 U	0.39 U	0.68 U	0.65 U
1,1-Dichloroethene	ppbv	0.80 U	0.80 U	0.80 U	1.0 U	1.8 U	1.7 U
1,2,4-Trichlorobenzene	ppbv	2.0 U	2.0 U	2.0 U	2.6 U	4.5 U	4.4 U
1,2,4-Trimethylbenzene	ppbv	0.80 U	2.3	1.0	1.5	1.8 U	1.7 U
1,2-Dibromoethane (Ethylene dibromide)	ppbv	0.80 U	0.80 U	0.80 U	1.0 U	1.8 U	1.7 U
1,2-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
1,2-Dichloroethane	ppbv	0.80 U	0.80 U	0.80 U	1.0 U	1.8 U	1.7 U
1,2-Dichloropropane	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
1,3,5-Trimethylbenzene	ppbv	0.40 U	0.94	0.53	0.54	0.90 U	0.87 U
1,3-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
1,4-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.40	0.52 U	0.90 U	0.87 U
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	7.2	2.2	2.3	3.0	3.1 J	5.5 J
2-Hexanone	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
4-Ethyl toluene	ppbv	0.40 U	0.43	0.40 U	0.52 U	0.90 U	0.87 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	0.55	1.5	2.4	1.8	0.90 U	0.87 U
Acetone	ppbv	25	19	16	12	11 U	11 U
Benzene	ppbv	0.40 U	0.40	0.40 U	0.52 U	0.90 U	0.87 U
Benzyl chloride	ppbv	0.80 U	0.80 U	0.80 U	1.0 U	1.8 U	1.7 U
Bromodichloromethane	ppbv	0.30 U	0.30 U	0.30 U	0.39 U	0.68 U	0.65 U
Bromoform	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
Bromomethane (Methyl bromide)	ppbv	0.80 U	0.80 U	0.80 U	1.0 U	1.8 U	1.7 U
Carbon disulfide	ppbv	4.0	6.4	19	11	3.5	4.4
Carbon tetrachloride	ppbv	0.80 U	0.80 U	1.7	3.6	1.8 U	1.7 U
Chlorobenzene	ppbv	0.30 U	0.30 U	0.30 U	0.39 U	0.68 U	0.65 U
Chloroethane	ppbv	0.80 U	0.80 U	0.80 U	1.0 U	1.8 U	1.7 U
Chloroform (Trichloromethane)	ppbv	0.30 U	0.30 U	7.4	24	0.68 U	0.65 U
Chloromethane (Methyl chloride)	ppbv	0.80 U	1.5	0.80 U	1.0 U	1.8 U	1.7 U
cis-1,2-Dichloroethene	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	3.3	3.1
cis-1,3-Dichloropropene	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
Dibromochloromethane	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
Dichlorodifluoromethane (CFC-12)	ppbv	1.5	0.68	39	82	0.90 U	0.87 U
Ethylbenzene	ppbv	1.8	3.6	3.6	2.2	0.90 U	0.87 U
Hexachlorobutadiene	ppbv	2.0 U	2.0 U	2.0 U	2.6 U	4.5 U	4.4 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-7A	SV-7B	SV-7C	SV-7D	SV-8A	SV-8A	
Sample Name:	G-170907-RA-18	G-170907-RA-19	G-170907-RA-20	G-170907-RA-21	G-170907-RA-29	G-170907-RA-30	
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017 Duplicate	
Parameters	Unit						
m&p-Xylenes	ppbv	7.0	16	15	9.2	1.8 U	1.7 U
Methylene chloride	ppbv	0.91	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
Naphthalene	ppbv	0.80 U	0.80 U	0.80 U	1.0 U	1.8 U	1.7 U
o-Xylene	ppbv	3.0	7.5	6.7	4.0	0.90 U	0.87 U
Styrene	ppbv	0.40 U	0.45	0.40 U	0.52 U	0.90 U	0.87 U
Tetrachloroethene	ppbv	4.5	5.5	7.7	32	120	110
Toluene	ppbv	3.7	3.3	3.6	4.8	1.6	0.89
trans-1,2-Dichloroethene	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
trans-1,3-Dichloropropene	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
Trichloroethene	ppbv	0.56	0.40 U	0.43	0.98	3.6	3.2
Trichlorofluoromethane (CFC-11)	ppbv	0.40 U	0.47	0.40 U	0.52 U	0.90 U	0.87 U
Trifluorotrchloroethane (CFC-113)	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
Vinyl acetate	ppbv	0.80 U	0.80 U	0.80 U	1.0 U	1.8 U	1.7 U
Vinyl chloride	ppbv	0.40 U	0.40 U	0.40 U	0.52 U	0.90 U	0.87 U
1,1,1-Trichloroethane	µg/m3	1.6 U	1.6 U	1.6 U	2.1 U	3.7 U	3.6 U
1,1,2,2-Tetrachloroethane	µg/m3	2.7 U	2.7 U	2.7 U	3.6 U	6.2 U	6.0 U
1,1,2-Trichloroethane	µg/m3	2.2 U	2.2 U	2.2 U	2.8 U	4.9 U	4.8 U
1,1-Dichloroethane	µg/m3	1.2 U	1.2 U	1.2 U	1.6 U	2.7 U	2.6 U
1,1-Dichloroethene	µg/m3	3.2 U	3.2 U	3.2 U	4.1 U	7.2 U	6.9 U
1,2,4-Trichlorobenzene	µg/m3	15 U	15 U	15 U	19 U	34 U	32 U
1,2,4-Trimethylbenzene	µg/m3	3.9 U	11	4.9	7.3	8.9 U	8.6 U
1,2-Dibromoethane (Ethylene dibromide)	µg/m3	6.1 U	6.1 U	6.1 U	8.0 U	14 U	13 U
1,2-Dichlorobenzene	µg/m3	2.4 U	2.4 U	2.4 U	3.1 U	5.4 U	5.2 U
1,2-Dichloroethane	µg/m3	3.2 U	3.2 U	3.2 U	4.2 U	7.3 U	7.1 U
1,2-Dichloropropane	µg/m3	1.8 U	1.8 U	1.8 U	2.4 U	4.2 U	4.0 U
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m3	2.8 U	2.8 U	2.8 U	3.6 U	6.3 U	6.1 U
1,3,5-Trimethylbenzene	µg/m3	2.0 U	4.6	2.6	2.7	4.4 U	4.3 U
1,3-Dichlorobenzene	µg/m3	2.4 U	2.4 U	2.4 U	3.1 U	5.4 U	5.2 U
1,4-Dichlorobenzene	µg/m3	2.4 U	2.4 U	2.4	3.1 U	5.4 U	5.2 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m3	21	6.6	6.8	8.9	9.1 J	16 J
2-Hexanone	µg/m3	1.6 U	1.6 U	1.6 U	2.1 U	3.7 U	3.6 U
4-Ethyl toluene	µg/m3	2.0 U	2.1	2.0 U	2.6 U	4.4 U	4.3 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m3	2.3	6.0	9.7	7.3	3.7 U	3.6 U
Acetone	µg/m3	59	45	39	28	27 U	26 U
Benzene	µg/m3	1.3 U	1.3	1.3 U	1.7 U	2.9 U	2.8 U
Benzyl chloride	µg/m3	4.1 U	4.1 U	4.1 U	5.4 U	9.4 U	9.0 U
Bromodichloromethane	µg/m3	2.0 U	2.0 U	2.0 U	2.6 U	4.5 U	4.4 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-7A	SV-7B	SV-7C	SV-7D	SV-8A	SV-8A	
Sample Name:	G-170907-RA-18	G-170907-RA-19	G-170907-RA-20	G-170907-RA-21	G-170907-RA-29	G-170907-RA-30	
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	
	Duplicate						
Parameters	Unit						
Bromoform	µg/m3	4.1 U	4.1 U	4.1 U	5.4 U	9.3 U	9.0 U
Bromomethane (Methyl bromide)	µg/m3	3.1 U	3.1 U	3.1 U	4.0 U	7.0 U	6.8 U
Carbon disulfide	µg/m3	13	20	59	34	11	14
Carbon tetrachloride	µg/m3	5.0 U	5.0 U	10	23	11 U	11 U
Chlorobenzene	µg/m3	1.4 U	1.4 U	1.4 U	1.8 U	3.1 U	3.0 U
Chloroethane	µg/m3	2.1 U	2.1 U	2.1 U	2.7 U	4.8 U	4.6 U
Chloroform (Trichloromethane)	µg/m3	1.5 U	1.5 U	36	110	3.3 U	3.2 U
Chloromethane (Methyl chloride)	µg/m3	1.7 U	3.1	1.7 U	2.1 U	3.7 U	3.6 U
cis-1,2-Dichloroethene	µg/m3	1.6 U	1.6 U	1.6 U	2.1 U	13	12
cis-1,3-Dichloropropene	µg/m3	1.8 U	1.8 U	1.8 U	2.4 U	4.1 U	4.0 U
Dibromochloromethane	µg/m3	3.4 U	3.4 U	3.4 U	4.4 U	7.7 U	7.4 U
Dichlorodifluoromethane (CFC-12)	µg/m3	7.4	3.4	190	400	4.5 U	4.3 U
Ethylbenzene	µg/m3	7.8	16	16	9.7	3.9 U	3.8 U
Hexachlorobutadiene	µg/m3	21 U	21 U	21 U	28 U	48 U	46 U
m&p-Xylenes	µg/m3	30	70	65	40	7.9 U	7.6 U
Methylene chloride	µg/m3	3.2	1.4 U	1.4 U	1.8 U	3.1 U	3.0 U
Naphthalene	µg/m3	4.2 U	4.2 U	4.2 U	5.5 U	9.5 U	9.1 U
o-Xylene	µg/m3	13	33	29	18	3.9 U	3.8 U
Styrene	µg/m3	1.7 U	1.9	1.7 U	2.2 U	3.9 U	3.7 U
Tetrachloroethene	µg/m3	31	37	52	220	830	770
Toluene	µg/m3	14	12	14	18	5.9	3.3
trans-1,2-Dichloroethene	µg/m3	1.6 U	1.6 U	1.6 U	2.1 U	3.6 U	3.5 U
trans-1,3-Dichloropropene	µg/m3	1.8 U	1.8 U	1.8 U	2.4 U	4.1 U	4.0 U
Trichloroethene	µg/m3	3.0	2.1 U	2.3	5.3	19	17
Trichlorofluoromethane (CFC-11)	µg/m3	2.2 U	2.6	2.2 U	2.9 U	5.1 U	4.9 U
Trifluorotrichloroethane (CFC-113)	µg/m3	3.1 U	3.1 U	3.1 U	4.0 U	6.9 U	6.7 U
Vinyl acetate	µg/m3	2.8 U	2.8 U	2.8 U	3.7 U	6.4 U	6.1 U
Vinyl chloride	µg/m3	1.0 U	1.0 U	1.0 U	1.3 U	2.3 U	2.2 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
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Location ID:	SV-8B	SV-9A	SV-9B	SV-9C	SV-9D	SVE-1
Sample Name:	G-170907-RA-31	G-170907-RA-25	G-170907-RA-26	G-170907-RA-27	G-170907-RA-28	SVE-1-170915-RA-01
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/15/2017

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	ppbv	0.30 U	0.30 U	0.30 U	1.1	2.3	0.59 U
1,1,1,2-Tetrachloroethane	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
1,1,2-Trichloroethane	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
1,1-Dichloroethane	ppbv	0.30 U	0.30 U	0.30 U	0.48 U	1.3 U	0.59 U
1,1-Dichloroethene	ppbv	0.80 U	0.80 U	0.80 U	1.3 U	3.4 U	1.6 U
1,2,4-Trichlorobenzene	ppbv	2.0 U	2.0 U	2.0 U	3.2 U	8.6 U	3.9 U
1,2,4-Trimethylbenzene	ppbv	0.80 U	0.85	0.80 U	1.3 U	3.4 U	1.6 U
1,2-Dibromoethane (Ethylene dibromide)	ppbv	0.80 U	0.80 U	0.80 U	1.3 U	3.4 U	1.6 U
1,2-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
1,2-Dichloroethane	ppbv	0.80 U	0.80 U	0.80 U	1.3 U	3.4 U	1.6 U
1,2-Dichloropropane	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
1,3,5-Trimethylbenzene	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
1,3-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
1,4-Dichlorobenzene	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	0.80 U	12	0.80 U	24	16	3.8
2-Hexanone	ppbv	0.40 U	0.71	0.40 U	1.2	1.7 U	0.79 U
4-Ethyl toluene	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	0.40 U	0.40 U	0.40 U	0.82	1.7 U	0.79 U
Acetone	ppbv	5.6	7.3	7.5	9.9	21 U	68
Benzene	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	1.4
Benzyl chloride	ppbv	0.80 U	0.80 U	0.80 U	1.3 U	3.4 U	1.6 U
Bromodichloromethane	ppbv	0.30 U	0.30 U	0.30 U	0.48 U	1.3 U	0.59 U
Bromoform	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
Bromomethane (Methyl bromide)	ppbv	0.80 U	0.80 U	0.80 U	1.3 U	3.4 U	1.6 U
Carbon disulfide	ppbv	3.7	4.1	18	5.0	5.4	1.6 U
Carbon tetrachloride	ppbv	0.80 U	0.80 U	0.80 U	1.3 U	3.4 U	1.6 U
Chlorobenzene	ppbv	0.30 U	0.30 U	0.30 U	0.48 U	1.3 U	0.59 U
Chloroethane	ppbv	0.80 U	0.80 U	0.80 U	1.3 U	3.4 U	1.6 U
Chloroform (Trichloromethane)	ppbv	0.30 U	0.45	0.51	0.96	1.3 U	0.59 U
Chloromethane (Methyl chloride)	ppbv	0.80 U	0.80 U	0.80 U	1.3 U	3.4 U	1.6 U
cis-1,2-Dichloroethene	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
cis-1,3-Dichloropropene	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
Dibromochloromethane	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
Dichlorodifluoromethane (CFC-12)	ppbv	0.51	0.40 U	1.1	3.8	14	0.81
Ethylbenzene	ppbv	0.40 U	0.50	0.40 U	0.74	1.7 U	0.79 U
Hexachlorobutadiene	ppbv	2.0 U	2.0 U	2.0 U	3.2 U	8.6 U	3.9 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-8B	SV-9A	SV-9B	SV-9C	SV-9D	SVE-1	
Sample Name:	G-170907-RA-31	G-170907-RA-25	G-170907-RA-26	G-170907-RA-27	G-170907-RA-28	SVE-1-170915-RA-01	
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/15/2017	
Parameters	Unit						
m&p-Xylenes	ppbv	0.80 U	2.1	0.80 U	2.9	3.4 U	1.6 U
Methylene chloride	ppbv	0.42	0.40 U	0.40 U	0.74	1.7 U	3.0
Naphthalene	ppbv	0.80 U	0.80 U	0.80 U	1.3 U	3.4 U	1.6 U
o-Xylene	ppbv	0.40 U	0.84	0.40 U	1.1	1.7 U	0.79 U
Styrene	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
Tetrachloroethene	ppbv	0.40 U	9.3	0.40 U	59	220	14
Toluene	ppbv	0.40 U	1.6	0.40 U	2.9	5.4	4.2
trans-1,2-Dichloroethene	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
trans-1,3-Dichloropropene	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
Trichloroethene	ppbv	0.40 U	1.3	0.40 U	1.6	2.1	1.3
Trichlorofluoromethane (CFC-11)	ppbv	0.40 U	0.40 U	1.2	1.1	1.7 U	1.5
Trifluorotrichloroethane (CFC-113)	ppbv	0.40 U	0.40 U	0.40 U	0.98	2.3	0.79 U
Vinyl acetate	ppbv	0.80 U	0.80 U	0.80 U	1.3 U	3.4 U	1.6 U
Vinyl chloride	ppbv	0.40 U	0.40 U	0.40 U	0.64 U	1.7 U	0.79 U
1,1,1-Trichloroethane	µg/m3	1.6 U	1.6 U	1.6 U	6.2	13	3.2 U
1,1,2,2-Tetrachloroethane	µg/m3	2.7 U	2.7 U	2.7 U	4.4 U	12 U	5.4 U
1,1,2-Trichloroethane	µg/m3	2.2 U	2.2 U	2.2 U	3.5 U	9.3 U	4.3 U
1,1-Dichloroethane	µg/m3	1.2 U	1.2 U	1.2 U	2.0 U	5.2 U	2.4 U
1,1-Dichloroethene	µg/m3	3.2 U	3.2 U	3.2 U	5.1 U	14 U	6.2 U
1,2,4-Trichlorobenzene	µg/m3	15 U	15 U	15 U	24 U	64 U	29 U
1,2,4-Trimethylbenzene	µg/m3	3.9 U	4.2	3.9 U	6.3 U	17 U	7.7 U
1,2-Dibromoethane (Ethylene dibromide)	µg/m3	6.1 U	6.1 U	6.1 U	9.9 U	26 U	12 U
1,2-Dichlorobenzene	µg/m3	2.4 U	2.4 U	2.4 U	3.9 U	10 U	4.7 U
1,2-Dichloroethane	µg/m3	3.2 U	3.2 U	3.2 U	5.2 U	14 U	6.4 U
1,2-Dichloropropane	µg/m3	1.8 U	1.8 U	1.8 U	3.0 U	7.9 U	3.6 U
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m3	2.8 U	2.8 U	2.8 U	4.5 U	12 U	5.5 U
1,3,5-Trimethylbenzene	µg/m3	2.0 U	2.0 U	2.0 U	3.2 U	8.4 U	3.9 U
1,3-Dichlorobenzene	µg/m3	2.4 U	2.4 U	2.4 U	3.9 U	10 U	4.7 U
1,4-Dichlorobenzene	µg/m3	2.4 U	2.4 U	2.4 U	3.9 U	10 U	4.7 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m3	2.4 U	37	2.4 U	70	47	11
2-Hexanone	µg/m3	1.6 U	2.9	1.6 U	4.8	7.0 U	3.2 U
4-Ethyl toluene	µg/m3	2.0 U	2.0 U	2.0 U	3.2 U	8.4 U	3.9 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m3	1.6 U	1.6 U	1.6 U	3.3	7.0 U	3.2 U
Acetone	µg/m3	13	17	18	23	51 U	160
Benzene	µg/m3	1.3 U	1.3 U	1.3 U	2.1 U	5.5 U	4.5
Benzyl chloride	µg/m3	4.1 U	4.1 U	4.1 U	6.7 U	18 U	8.2 U
Bromodichloromethane	µg/m3	2.0 U	2.0 U	2.0 U	3.2 U	8.6 U	4.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SV-8B	SV-9A	SV-9B	SV-9C	SV-9D	SVE-1	
Sample Name:	G-170907-RA-31	G-170907-RA-25	G-170907-RA-26	G-170907-RA-27	G-170907-RA-28	SVE-1-170915-RA-01	
Sample Date:	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/07/2017	09/15/2017	
Parameters	Unit						
Bromoform	µg/m3	4.1 U	4.1 U	4.1 U	6.7 U	18 U	8.1 U
Bromomethane (Methyl bromide)	µg/m3	3.1 U	3.1 U	3.1 U	5.0 U	13 U	6.1 U
Carbon disulfide	µg/m3	12	13	55	16	17	4.9 U
Carbon tetrachloride	µg/m3	5.0 U	5.0 U	5.0 U	8.1 U	22 U	9.9 U
Chlorobenzene	µg/m3	1.4 U	1.4 U	1.4 U	2.2 U	5.9 U	2.7 U
Chloroethane	µg/m3	2.1 U	2.1 U	2.1 U	3.4 U	9.0 U	4.2 U
Chloroform (Trichloromethane)	µg/m3	1.5 U	2.2	2.5	4.7	6.3 U	2.9 U
Chloromethane (Methyl chloride)	µg/m3	1.7 U	1.7 U	1.7 U	2.7 U	7.1 U	3.3 U
cis-1,2-Dichloroethene	µg/m3	1.6 U	1.6 U	1.6 U	2.6 U	6.8 U	3.1 U
cis-1,3-Dichloropropene	µg/m3	1.8 U	1.8 U	1.8 U	2.9 U	7.8 U	3.6 U
Dibromochloromethane	µg/m3	3.4 U	3.4 U	3.4 U	5.5 U	15 U	6.7 U
Dichlorodifluoromethane (CFC-12)	µg/m3	2.5	2.0 U	5.5	19	70	4.0
Ethylbenzene	µg/m3	1.7 U	2.2	1.7 U	3.2	7.4 U	3.4 U
Hexachlorobutadiene	µg/m3	21 U	21 U	21 U	34 U	91 U	42 U
m&p-Xylenes	µg/m3	3.5 U	9.3	3.5 U	12	15 U	6.8 U
Methylene chloride	µg/m3	1.4	1.4 U	1.4 U	2.6	5.9 U	10
Naphthalene	µg/m3	4.2 U	4.2 U	4.2 U	6.8 U	18 U	8.3 U
o-Xylene	µg/m3	1.7 U	3.7	1.7 U	4.6	7.4 U	3.4 U
Styrene	µg/m3	1.7 U	1.7 U	1.7 U	2.7 U	7.3 U	3.4 U
Tetrachloroethene	µg/m3	2.7 U	63	2.7 U	400	1500	98
Toluene	µg/m3	1.5 U	6.0	1.5 U	11	20	16
trans-1,2-Dichloroethene	µg/m3	1.6 U	1.6 U	1.6 U	2.6 U	6.8 U	3.1 U
trans-1,3-Dichloropropene	µg/m3	1.8 U	1.8 U	1.8 U	2.9 U	7.8 U	3.6 U
Trichloroethene	µg/m3	2.1 U	6.8	2.1 U	8.7	11	7.2
Trichlorofluoromethane (CFC-11)	µg/m3	2.2 U	2.2 U	6.8	6.1	9.6 U	8.6
Trifluorotrchloroethane (CFC-113)	µg/m3	3.1 U	3.1 U	3.1 U	7.5	17	6.0 U
Vinyl acetate	µg/m3	2.8 U	2.8 U	2.8 U	4.5 U	12 U	5.5 U
Vinyl chloride	µg/m3	1.0 U	1.0 U	1.0 U	1.6 U	4.4 U	2.0 U

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SVE-2	VAP-12C	VAP-12D
Sample Name:	SVE-2-170915-RA-02	G-170906-RA-07	G-170906-RA-08
Sample Date:	09/15/2017	09/06/2017	09/06/2017

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	ppbv	0.63 U	1.6 U	1.0 U
1,1,2,2-Tetrachloroethane	ppbv	0.84 U	2.2 U	1.4 U
1,1,2-Trichloroethane	ppbv	0.84 U	2.2 U	1.4 U
1,1-Dichloroethane	ppbv	0.63 U	1.6 U	1.0 U
1,1-Dichloroethene	ppbv	1.7 U	4.3 U	2.8 U
1,2,4-Trichlorobenzene	ppbv	4.2 U	11 U	6.9 U
1,2,4-Trimethylbenzene	ppbv	1.7 U	4.3 U	2.8 U
1,2-Dibromoethane (Ethylene dibromide)	ppbv	1.7 U	4.3 U	2.8 U
1,2-Dichlorobenzene	ppbv	0.84 U	2.2 U	1.4 U
1,2-Dichloroethane	ppbv	1.7 U	4.3 U	2.8 U
1,2-Dichloropropane	ppbv	0.84 U	2.2 U	1.4 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	0.84 U	2.2 U	1.4 U
1,3,5-Trimethylbenzene	ppbv	0.84 U	2.2 U	1.4 U
1,3-Dichlorobenzene	ppbv	0.84 U	2.2 U	1.4 U
1,4-Dichlorobenzene	ppbv	0.84 U	2.2 U	1.4 U
2-Butanone (Methyl ethyl ketone) (MEK)	ppbv	3.2	4.3 U	3.2
2-Hexanone	ppbv	0.84 U	2.2 U	1.4 U
4-Ethyl toluene	ppbv	0.84 U	2.2 U	1.4 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ppbv	0.84 U	5.8	1.4 U
Acetone	ppbv	37	27 U	17 U
Benzene	ppbv	0.84 U	2.2 U	1.4 U
Benzyl chloride	ppbv	1.7 U	4.3 U	2.8 U
Bromodichloromethane	ppbv	0.63 U	1.6 U	1.0 U
Bromoform	ppbv	0.84 U	2.2 U	1.4 U
Bromomethane (Methyl bromide)	ppbv	1.7 U	4.3 U	2.8 U
Carbon disulfide	ppbv	4.4	5.5	4.4
Carbon tetrachloride	ppbv	1.7 U	4.3 U	2.8 U
Chlorobenzene	ppbv	0.63 U	1.6 U	1.0 U
Chloroethane	ppbv	1.7 U	32	2.8 U
Chloroform (Trichloromethane)	ppbv	0.63 U	2.2	1.2
Chloromethane (Methyl chloride)	ppbv	1.7 U	110	2.8 U
cis-1,2-Dichloroethene	ppbv	0.84 U	2.2 U	1.4 U
cis-1,3-Dichloropropene	ppbv	0.84 U	2.2 U	1.4 U
Dibromochloromethane	ppbv	0.84 U	2.2 U	1.4 U
Dichlorodifluoromethane (CFC-12)	ppbv	3.9	8.4	8.1
Ethylbenzene	ppbv	0.84 U	2.2 U	1.4 U
Hexachlorobutadiene	ppbv	4.2 U	11 U	6.9 U

Table 2

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SVE-2	VAP-12C	VAP-12D	
Sample Name:	SVE-2-170915-RA-02	G-170906-RA-07	G-170906-RA-08	
Sample Date:	09/15/2017	09/06/2017	09/06/2017	
Parameters	Unit			
m&p-Xylenes	ppbv	1.7 U	4.9	2.8 U
Methylene chloride	ppbv	3.2	2.2 U	1.4 U
Naphthalene	ppbv	1.7 U	4.3 U	2.8 U
o-Xylene	ppbv	0.84 U	2.2 U	1.4 U
Styrene	ppbv	0.84 U	2.2 U	1.4 U
Tetrachloroethene	ppbv	3.4	280	290
Toluene	ppbv	0.84 U	4.1	8.2
trans-1,2-Dichloroethene	ppbv	0.84 U	2.2 U	1.4 U
trans-1,3-Dichloropropene	ppbv	0.84 U	2.2 U	1.4 U
Trichloroethene	ppbv	5.9	5.2	4.9
Trichlorofluoromethane (CFC-11)	ppbv	1.0	2.2 U	1.4 U
Trifluorotrchloroethane (CFC-113)	ppbv	0.84 U	2.2 U	1.4 U
Vinyl acetate	ppbv	1.7 U	4.3 U	2.8 U
Vinyl chloride	ppbv	0.84 U	2.2 U	1.4 U
1,1,1-Trichloroethane	µg/m3	3.4 U	8.8 U	5.6 U
1,1,2,2-Tetrachloroethane	µg/m3	5.8 U	15 U	9.4 U
1,1,2-Trichloroethane	µg/m3	4.6 U	12 U	7.5 U
1,1-Dichloroethane	µg/m3	2.5 U	6.6 U	4.2 U
1,1-Dichloroethene	µg/m3	6.7 U	17 U	11 U
1,2,4-Trichlorobenzene	µg/m3	31 U	80 U	51 U
1,2,4-Trimethylbenzene	µg/m3	8.3 U	21 U	14 U
1,2-Dibromoethane (Ethylene dibromide)	µg/m3	13 U	33 U	21 U
1,2-Dichlorobenzene	µg/m3	5.1 U	13 U	8.3 U
1,2-Dichloroethane	µg/m3	6.8 U	17 U	11 U
1,2-Dichloropropane	µg/m3	3.9 U	10 U	6.4 U
1,2-Dichlorotetrafluoroethane (CFC 114)	µg/m3	5.9 U	15 U	9.6 U
1,3,5-Trimethylbenzene	µg/m3	4.1 U	11 U	6.8 U
1,3-Dichlorobenzene	µg/m3	5.1 U	13 U	8.3 U
1,4-Dichlorobenzene	µg/m3	5.1 U	13 U	8.3 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/m3	9.4	13 U	9.4
2-Hexanone	µg/m3	3.4 U	8.9 U	5.6 U
4-Ethyl toluene	µg/m3	4.1 U	11 U	6.8 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/m3	3.4 U	24	5.6 U
Acetone	µg/m3	87	64 U	41 U
Benzene	µg/m3	2.7 U	6.9 U	4.4 U
Benzyl chloride	µg/m3	8.7 U	22 U	14 U
Bromodichloromethane	µg/m3	4.2 U	11 U	6.9 U

Table 2

Validated Analytical Results Summary
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Location ID:	SVE-2	VAP-12C	VAP-12D	
Sample Name:	SVE-2-170915-RA-02	G-170906-RA-07	G-170906-RA-08	
Sample Date:	09/15/2017	09/06/2017	09/06/2017	
Parameters	Unit			
Bromoform	µg/m3	8.7 U	22 U	14 U
Bromomethane (Methyl bromide)	µg/m3	6.5 U	17 U	11 U
Carbon disulfide	µg/m3	14	17	14
Carbon tetrachloride	µg/m3	11 U	27 U	17 U
Chlorobenzene	µg/m3	2.9 U	7.5 U	4.8 U
Chloroethane	µg/m3	4.4 U	84	7.3 U
Chloroform (Trichloromethane)	µg/m3	3.1 U	11	5.6
Chloromethane (Methyl chloride)	µg/m3	3.5 U	220	5.7 U
cis-1,2-Dichloroethene	µg/m3	3.3 U	8.6 U	5.5 U
cis-1,3-Dichloropropene	µg/m3	3.8 U	9.8 U	6.2 U
Dibromochloromethane	µg/m3	7.2 U	18 U	12 U
Dichlorodifluoromethane (CFC-12)	µg/m3	19	42	40
Ethylbenzene	µg/m3	3.6 U	9.4 U	6.0 U
Hexachlorobutadiene	µg/m3	45 U	120 U	73 U
m&p-Xylenes	µg/m3	7.3 U	21	12 U
Methylene chloride	µg/m3	11	7.5 U	4.8 U
Naphthalene	µg/m3	8.8 U	23 U	14 U
o-Xylene	µg/m3	3.6 U	9.4 U	6.0 U
Styrene	µg/m3	3.6 U	9.2 U	5.9 U
Tetrachloroethene	µg/m3	23	1900	2000
Toluene	µg/m3	3.2 U	15	31
trans-1,2-Dichloroethene	µg/m3	3.3 U	8.6 U	5.5 U
trans-1,3-Dichloropropene	µg/m3	3.8 U	9.8 U	6.2 U
Trichloroethene	µg/m3	32	28	26
Trichlorofluoromethane (CFC-11)	µg/m3	5.9	12 U	7.7 U
Trifluorotrichloroethane (CFC-113)	µg/m3	6.4 U	17 U	11 U
Vinyl acetate	µg/m3	5.9 U	15 U	9.7 U
Vinyl chloride	µg/m3	2.1 U	5.5 U	3.5 U

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated

Table 3

Analytical Method
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017

Parameter	Method	Matrix	Holding Time	
			Collection to Extraction (Days)	Collection or Extraction to Analysis (Days)
Volatile Organic Compounds (VOCs)	TO-15	Air	-	30

Note:

Method References:

TO-15 - "Compendium of Methods for the Determination of Toxic Organic Compounds in Air", EPA-625/R-96/010b, January 1999.

VOCs - Volatile organic compounds

Table 4

**Qualified Sample Data Due to Variability in Field Duplicate Results
Sub-slab, Soil Vapor and Soil Vapor Extraction Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
September 2017**

Parameter	Analyte	RPD/Diff	Sample ID	Qualified Result	Field Duplicate Sample ID	Qualified Result	Units
VOCs	Acetone	Diff = 8.3	G-170907-RA-22	18 J 43 J	G-170907-RA-23	9.7 J 23 J	ppbv µg/m3
VOCs	Carbon disulfide	Diff = 2.7		1.6 J 5.0 J		4.3 J 13 J	ppbv µg/m3
VOCs	Dichlorodifluoromethane (CFC-12)	RPD = 115		11 J 54 J		41 J 200 J	ppbv µg/m3
VOCs	Tetrachloroethene	Diff = 25.5		0.53 J 3.6 J		26 J 170 J	ppbv µg/m3
VOCs	Trichloroethene	Diff = 3.3		0.4 UJ 2.1 UJ		3.7 J 20 J	ppbv µg/m3
VOCs	2-Butanone (Methyl ethyl ketone) (MEK)	Diff = 3.3	G-170907-RA-29	3.1 J 9.1 J	G-170907-RA-30	5.5 J 16 J	ppbv µg/m3

Notes:

- Diff - Difference (i.e., >1X RL for soil gas)
- RPD - Relative Percent Difference
- VOCs - Volatile organic compounds
- J - Estimated concentration
- UJ - Not detected; associated reporting limit is estimated



Memorandum

October 16, 2017

To: Brian Sandberg, GHD

Ref. No.: 088751

From: Ruth Mickle/sb/14

Tel: 651-639-0913

**Subject: Analytical Results and Reduced Validation
Groundwater & Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July–August 2017**

1. Introduction

This document details a reduced validation of analytical results for groundwater and soil samples collected in support of the sampling event at 6714 Walker Street during July and August 2017. Samples were submitted to TestAmerica Laboratories, Inc., located in North Canton, Ohio. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Tables 2A and 2B. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spikes (MS), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

- i) "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008
- ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review", USEPA 540 R 10 011, January 2010

Items i) and ii) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times.



The samples should be preserved and delivered on ice, and stored by the laboratory at the required temperature of approximately 4°C (or 4+/-2°C) as specified in the method. The method holding time for preserved samples (pH<2) is 14 days from collection to analysis. If samples are not preserved at the time of sample collection or arrive at the lab with a pH >2, the method holding time is 7 days from collection to analysis. A large number of samples had been preserved but, when verified by the lab, the pH was greater than 2. In most cases, the samples were analyzed more than 7 days past the collection date. As a result, the associated sample results were qualified estimated, as noted in Table 4. The remaining samples were prepared and analyzed within the required holding times.

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

Laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Several volatile organic compound (VOC) blank yielded low-level detections of target parameters. In some cases, associated sample results were non-detect and were not impacted by the laboratory contamination. The associated sample detections that were qualified non-detect are presented in Table 5. The remaining method blank results were either non-detect or yielded detections within acceptance criteria.

4. Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. Table 6 presents the outlying surrogate data that resulted in qualification. The associated VOC results were qualified estimated, as noted in the table. The remaining percent recoveries were within the control limits, demonstrating acceptable analytical accuracy.

5. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.



The LCS contained all compounds of interest. The LCS data were within the laboratory control limits, demonstrating acceptable analytical accuracy.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

MS/MSD analyses were performed as specified in Table 1.

The MS/MSD samples were spiked with all compounds of interest. Several percent recoveries were above the upper laboratory control limit. However, since the associated sample was reported to be non-detect for those compounds, no qualification of data was necessary.

7. Field QA/QC Samples

The field QA/QC consisted of seven trip blanks, three field blanks, one rinse blank and three field duplicate sample sets.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, seven trip blanks were submitted to the laboratory for VOC analysis. The majority of trip blank data were non-detect for VOC parameters. Table 7 presents the associated acetone and methylene chloride detections that were qualified non-detect based on trip blank results.

Field Blank Sample Analysis

To assess field ambient conditions at the site and cleanliness of sample containers, three field blanks were submitted for analysis, as identified in Table 1. Low-level acetone was detected in one field blank. Since the associated sample data were either non-detect or yielded detections within acceptance criteria, no data qualification was required. All remaining field blank results were non-detect for the analytes of interest.

Rinse Blank Sample Analysis

To assess field decontamination procedures, ambient conditions at the site, and cleanliness of sample containers, a rinse blank was submitted for analysis, as identified in Table 1. Low-level acetone and naphthalene were detected in the rinse blank sample. Acetone was not detected in the associated investigative sample and qualification of the sample data was not required. Naphthalene was detected in the associated sample, but at a concentration greater than five times the amount in the rinse blank. Based on this, no data qualification was required based on the rinse blank results. All remaining rinse blank results were non-detect for the compounds of interest.



Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, three field duplicate sample sets were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these water duplicate samples must be less than 50 percent. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value. There were no soil field duplicate sets.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Tables 2A and 2B unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Tables 2A and 2B.

9. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Tables 2A and 2B are acceptable with the qualifications noted herein.

Table 1

**Sample Collection and Analysis Summary
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
TestAmerica SDG No. 240-82505-1								
S-170717-RA-01	SV-9	soil	1	3	07/17/2017	11:00	VOC	
S-170718-RA-02	SV-2	soil	1	4.5	07/18/2017	14:40	VOC	
S-170718-RA-03	SV-2	soil	15	--	07/18/2017	14:50	VOC	
W-170717-RA-01	SV-9	water	42	46	07/17/2017	12:50	VOC	
W-170717-RA-02	SV-9	water	46	50	07/17/2017	13:20	VOC	
W-170717-RA-03	SV-9	water	50	54	07/17/2017	13:50	VOC	MS/MSD
W-170717-RA-04	SV-9	water	54	58	07/17/2017	15:20	VOC	
W-170717-RA-05	SV-9	water	58	62	07/17/2017	15:10	VOC	
W-170717-RA-06	SV-9	water	58	62	07/17/2017	16:10	VOC	duplicate (RA-05)
TRIP BLANK	--	water	--	--	07/17/2017	--	VOC	
TestAmerica SDG No. 240-82669-1								
W-170719-RA-07	SV-6	water	42	46	07/19/2017	8:00	VOC	
W-170719-RA-08	SV-6	water	46	50	07/19/2017	9:10	VOC	
W-170719-RA-09	SV-6	water	50	54	07/19/2017	10:20	VOC	
W-170719-RA-10	SV-6	water	50	54	07/19/2017	10:20	VOC	duplicate (RA-09)
W-170719-RA-11	SV-6	water	54	58	07/19/2017	11:00	VOC	
W-170719-RA-12	SV-6	water	58	62	07/19/2017	12:55	VOC	
W-170719-RA-13	SV-2	water	42	46	07/19/2017	8:30	VOC	
W-170719-RA-14	SV-2	water	46	50	07/19/2017	8:50	VOC	
W-170719-RA-15	SV-2	water	50	54	07/19/2017	10:00	VOC	
W-170719-RA-16	SV-2	water	50	54	07/19/2017	10:50	VOC	field blank
W-170719-RA-17	SV-2	water	54	58	07/19/2017	12:50	VOC	
W-170719-RA-18	SV-2	water	58	62	07/19/2017	13:50	VOC	
TRIP BLANK	--	water	--	--	07/19/2017	--	VOC	trip blank

Table 1

Sample Collection and Analysis Summary
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017

Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/ Parameters	Comments
TestAmerica SDG No. 240-82670-1								
S-170720-RA-04	VAP-11	soil	1	3.5	07/20/2017	10:45	VOC	
S-170720-RA-05	VAP-11	soil	4	7	07/20/2017	10:45	VOC	
S-170720-RA-06	VAP-11	soil	25	--	07/20/2017	11:20	VOC	
S-170720-RA-07	VAP-11	soil	35	--	07/20/2017	11:20	VOC	
S-170720-RA-08	SV-6	soil	51	52	07/20/2017	11:30	VOC	
S-170720-RA-09	VAP-11	soil	49	--	07/20/2017	13:40	VOC	
TestAmerica SDG No. 240-82739-1								
S-170720-RA-10	VAP-11	soil	69	--	07/20/2017	14:50	VOC	
S-170720-RA-11	VAP-11	soil	74	--	07/20/2017	15:00	VOC	
W-170721-RA-19	SV-4	water	42	46	07/21/2017	8:50	VOC	
W-170721-RA-20	SV-4	water	46	50	07/21/2017	9:45	VOC	
W-170721-RA-21	SV-4	water	50	54	07/21/2017	10:20	VOC	
W-170721-RA-22	SV-4	water	54	58	07/21/2017	11:00	VOC	
W-170721-RA-23	SV-4	water	58	62	07/21/2017	11:50	VOC	
W-170721-RA-24	VAP-11	water	46	50	07/21/2017	12:05	VOC	field blank
W-170721-RA-25	VAP-11	water	42	46	07/21/2017	11:35	VOC	
W-170721-RA-26	VAP-11	water	46	50	07/21/2017	12:00	VOC	
W-170721-RA-27	SV-4	water	58	62	07/21/2017	12:15	VOC	rinse blank
W-170721-RA-28	VAP-11	water	50	54	07/21/2017	13:50	VOC	
TRIP BLANK	--	water	--	--	07/21/2017	--	VOC	trip blank
TestAmerica SDG No. 240-82983-1								
W-170726-RA-29	VAP-11	water	54	58	07/26/2017	12:00	VOC	
W-170726-RA-30	VAP-11	water	63	67	07/26/2017	12:30	VOC	
W-170726-RA-31	VAP-11	water	71	75	07/26/2017	13:50	VOC	
W-170727-RA-39	SV-5	water	46	50	07/27/2017	9:20	VOC	
W-170727-RA-40	SV-5	water	46	50	07/27/2017	9:20	VOC	field blank

Table 1

Sample Collection and Analysis Summary
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017

Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/ Parameters	Comments	
TestAmerica SDG No. 240-82983-1									
W-170727-RA-41	SV-5	water	50	54	07/27/2017	10:15	VOC	duplicate (RA-41)	
W-170727-RA-42	SV-5	water	50	54	07/27/2017	10:15	VOC		
W-170727-RA-34	SV-7	water	42	46	07/27/2017	9:10	VOC		
W-170727-RA-35	SV-7	water	46	50	07/27/2017	10:00	VOC		
W-170727-RA-36	SV-7	water	50	54	07/27/2017	10:55	VOC		
W-170727-RA-37	SV-7	water	54	58	07/27/2017	13:20	VOC		
W-170726-RA-32	SV-5	water	42	46	07/26/2017	14:10	VOC		
S-170726-RA-12	SV-4	soil	20	--	07/26/2017	14:00	VOC	trip blank	
TRIP BLANK	--	water	--	--	07/26/2017	--	VOC		
TestAmerica SDG No. 240-83023-1									
W-170727-RA-33	SV-5	water	58	62	07/27/2017	15:50	VOC	trip blank	
W-170727-RA-38	SV-7	water	58	62	07/27/2017	14:05	VOC		
W-170727-RA-43	SV-5	water	54	58	07/27/2017	13:35	VOC		
S-170728-RA-13	SV-7	soil	53	--	07/28/2017	9:15	lab fix		
TRIP BLANK	--	water	--	--	07/27/2017	--	VOC		
TestAmerica SDG No. 240-83244-1									
W-170801-RA-44	VAP-13	water	42	46	08/01/2017	9:53	VOC		MS/MSD
W-170801-RA-45	VAP-13	water	46	50	08/01/2017	10:35	VOC		
W-170801-RA-46	VAP-13	water	50	54	08/01/2017	11:40	VOC		
W-170801-RA-47	VAP-13	water	54	58	08/01/2017	13:20	VOC		
W-170801-RA-48	VAP-13	water	63	67	08/01/2017	14:25	VOC		
W-170801-RA-49	VAP-13	water	71	75	08/01/2017	16:40	VOC		
TRIP BLANK	--	water	--	--	08/01/2017	--	VOC		
S-170802-RA-14	VAP-13	soil	10	10.5	08/02/2017	11:55	VOC	trip blank	
S-170802-RA-15	VAP-13	soil	15.5	16	08/02/2017	12:02	VOC		
S-170802-RA-16	VAP-13	soil	25	26	08/02/2017	12:25	VOC		

Table 1

**Sample Collection and Analysis Summary
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters	Comments
TestAmerica SDG No. 240-83244-1								
S-170802-RA-17	VAP-13	soil	35	36	08/02/2017	12:45	VOC	
S-170802-RA-18	VAP-13	soil	70	75	08/02/2017	14:30	VOC	
TestAmerica SDG No. 240-83317-1								
W-170803-RA-50	VAP-12	water	42	46	08/03/2017	9:00	VOC	
W-170803-RA-51	VAP-12	water	46	50	08/03/2017	10:05	VOC	
W-170803-RA-52	VAP-12	water	50	54	08/03/2017	10:55	VOC	
W-170803-RA-53	VAP-12	water	54	58	08/03/2017	12:00	VOC	
W-170803-RA-54	VAP-12	water	62	67	08/03/2017	13:00	VOC	
W-170803-RA-55	VAP-12	water	71	75	08/03/2017	15:30	VOC	
S-170804-RA-19	VAP-12	soil	1	3.5	08/04/2017	8:30	VOC	
S-170804-RA-20	VAP-12	soil	4	7	08/04/2017	8:30	VOC	
S-170804-RA-21	VAP-12	soil	25	--	08/04/2017	8:45	VOC	
TRIP BLANK	--	water	--	--	08/03/2017	--	VOC	trip blank
TestAmerica SDG No. 240-83881-1								
W-170817-RA-56	SV-8	water	46	50	08/17/2017	7:45	VOC	
W-170817-RA-57	SV-8	water	54	58	08/17/2017	8:30	VOC	
W-170817-RA-58	MW-1B	water	--	--	08/17/2017	13:35	VOC	
W-170817-RA-59	MW-1A	water	--	--	08/17/2017	14:05	VOC	
TRIP BLANK	--	water	--	--	08/17/2017	--	VOC	trip blank

Notes:

MS/MSD - Matrix spike/matrix spike duplicate
VOC - Volatile Organic Compounds

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	MW-1A	MW-1B	SV-2	SV-2	SV-2	SV-2
Sample Name:	W-170817-RA-59	W-170817-RA-58	W-170719-RA-13	W-170719-RA-14	W-170719-RA-15	W-170719-RA-16
Sample Date:	08/17/2017	08/17/2017	07/19/2017	07/19/2017	07/19/2017	07/19/2017
Depth:	--	--	42-46 ft	46-50 ft	50-54 ft	50-54 ft

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
1,1,2-Trichloroethane	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
1,1-Dichloroethane	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
1,1-Dichloroethene	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	500 U	11 U	200 UJ	2000 UJ	140 UJ	1.0 UJ
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1000 U	22 U	400 U	4000 U	290 U	2.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
1,2-Dichlorobenzene	µg/L	500 U	13	200 UJ	2000 UJ	140 UJ	1.0 UJ
1,2-Dichloroethane	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
1,2-Dichloropropane	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
1,3-Dichlorobenzene	µg/L	500 U	11 U	200 UJ	2000 UJ	140 UJ	1.0 UJ
1,4-Dichlorobenzene	µg/L	500 U	11 U	200 UJ	2000 UJ	140 UJ	1.0 UJ
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	5000 U	110 U	2000 U	20000 U	1400 U	10 U
2-Hexanone	µg/L	5000 U	110 U	2000 U	20000 U	1400 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	5000 U	110 U	2000 U	20000 U	1400 U	10 U
Acetone	µg/L	5000 U	110 U	2000 U	20000 U	1400 U	2.2 J
Benzene	µg/L	500 U	50	200 UJ	2000 UJ	140 UJ	1.0 UJ
Bromodichloromethane	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Bromoform	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Carbon disulfide	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Carbon tetrachloride	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Chlorobenzene	µg/L	500 U	11 U	200 UJ	2000 UJ	140 UJ	1.0 UJ
Chloroethane	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Chloroform (Trichloromethane)	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
cis-1,2-Dichloroethene	µg/L	500 U	280	200 U	2000 U	140 U	1.0 U
cis-1,3-Dichloropropene	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Cyclohexane	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	MW-1A	MW-1B	SV-2	SV-2	SV-2	SV-2
Sample Name:	W-170817-RA-59	W-170817-RA-58	W-170719-RA-13	W-170719-RA-14	W-170719-RA-15	W-170719-RA-16
Sample Date:	08/17/2017	08/17/2017	07/19/2017	07/19/2017	07/19/2017	07/19/2017
Depth:	--	--	42-46 ft	46-50 ft	50-54 ft	50-54 ft

Parameters	Unit						
Dibromochloromethane	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Ethylbenzene	µg/L	500 U	22	200 UJ	2000 UJ	140 UJ	1.0 UJ
Isopropyl benzene	µg/L	500 U	3.4 J	200 UJ	2000 UJ	140 UJ	1.0 UJ
Methyl acetate	µg/L	5000 U	110 U	2000 U	20000 U	1400 U	10 U
Methyl cyclohexane	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Methylene chloride	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Naphthalene	µg/L	500 U	110	1100 J	1600 J	140 UJ	1.0 UJ
Styrene	µg/L	500 U	11 U	200 UJ	2000 UJ	140 UJ	1.0 UJ
Tetrachloroethene	µg/L	14000	11 U	5700	62000	3100	1.0 U
Toluene	µg/L	500 U	11 U	200 UJ	2000 UJ	140 UJ	1.0 UJ
trans-1,2-Dichloroethene	µg/L	500 U	13	200 U	2000 U	140 U	1.0 U
trans-1,3-Dichloropropene	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Trichloroethene	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	500 U	11 U	200 U	2000 U	140 U	1.0 U
Vinyl chloride	µg/L	500 U	59	200 U	2000 U	140 U	1.0 U
Xylenes (total)	µg/L	1000 U	28	400 UJ	4000 UJ	290 UJ	2.0 UJ

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	SV-2	SV-2	SV-4	SV-4	SV-4	SV-4
Sample Name:	W-170719-RA-17	W-170719-RA-18	W-170721-RA-19	W-170721-RA-20	W-170721-RA-21	W-170721-RA-22
Sample Date:	07/19/2017	07/19/2017	07/21/2017	07/21/2017	07/21/2017	07/21/2017
Depth:	54-58 ft	58-62 ft	42-46 ft	46-50 ft	50-54 ft	54-58 ft

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
1,1-Dichloroethane	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
1,1-Dichloroethene	µg/L	20 U	20 U	1.0 U	1.5 J	8.0 U	5.0 U
1,2,4-Trichlorobenzene	µg/L	20 UJ	20 UJ	1.0 U	5.0 U	8.0 U	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	40 U	40 U	2.0 U	10 U	16 U	10 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
1,2-Dichlorobenzene	µg/L	20 UJ	20 UJ	1.0 U	5.0 U	8.0 U	5.0 U
1,2-Dichloroethane	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
1,2-Dichloropropane	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
1,3-Dichlorobenzene	µg/L	20 UJ	20 UJ	1.0 U	5.0 U	8.0 U	5.0 U
1,4-Dichlorobenzene	µg/L	20 UJ	20 UJ	1.0 U	5.0 U	8.0 U	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	200 U	200 U	10 U	50 U	80 U	50 U
2-Hexanone	µg/L	200 U	200 U	10 U	50 U	80 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	200 U	200 U	10 U	50 U	80 U	50 U
Acetone	µg/L	200 U	82 J	10 U	50 U	80 U	50 U
Benzene	µg/L	20 UJ	15 J	1.0 U	1.6 J	16	25
Bromodichloromethane	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Bromoform	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Carbon disulfide	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Carbon tetrachloride	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Chlorobenzene	µg/L	20 UJ	20 UJ	1.0 U	5.0 U	8.0 U	5.0 U
Chloroethane	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Chloroform (Trichloromethane)	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	86	25	5.4	160	240	8.0
cis-1,3-Dichloropropene	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Cyclohexane	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
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Location ID:	SV-2	SV-2	SV-4	SV-4	SV-4	SV-4
Sample Name:	W-170719-RA-17	W-170719-RA-18	W-170721-RA-19	W-170721-RA-20	W-170721-RA-21	W-170721-RA-22
Sample Date:	07/19/2017	07/19/2017	07/21/2017	07/21/2017	07/21/2017	07/21/2017
Depth:	54-58 ft	58-62 ft	42-46 ft	46-50 ft	50-54 ft	54-58 ft

Parameters	Unit						
Dibromochloromethane	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Ethylbenzene	µg/L	20 UJ	20 UJ	1.0 U	5.0 U	8.0 U	3.9 J
Isopropyl benzene	µg/L	20 UJ	20 UJ	1.0 U	5.0 U	8.0 U	2.0 J
Methyl acetate	µg/L	200 U	200 U	10 U	50 U	80 U	50 U
Methyl cyclohexane	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Methyl tert butyl ether (MTBE)	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Methylene chloride	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Naphthalene	µg/L	20 UJ	6.7 J	1.0 U	5.0 U	8.0 U	41
Styrene	µg/L	20 UJ	20 UJ	1.0 U	5.0 U	8.0 U	5.0 U
Tetrachloroethene	µg/L	610	660	0.86 J	5.0 U	8.0 U	5.0 U
Toluene	µg/L	20 UJ	20 UJ	0.30 J	5.0 U	8.0 U	5.0 U
trans-1,2-Dichloroethene	µg/L	14 J	8.4 J	14	87	160	16
trans-1,3-Dichloropropene	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Trichloroethene	µg/L	71	21	12	5.0 U	8.0 U	5.0 U
Trichlorofluoromethane (CFC-11)	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	20 U	20 U	1.0 U	5.0 U	8.0 U	5.0 U
Vinyl chloride	µg/L	20 U	25	1.0 U	12	44	2.4 J
Xylenes (total)	µg/L	40 UJ	40 UJ	2.0 U	10 U	16 U	3.4 J

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
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Location ID:	SV-4	SV-4	SV-5	SV-5	SV-5	SV-5
Sample Name:	W-170721-RA-23	W-170721-RA-27	W-170726-RA-32	W-170727-RA-39	W-170727-RA-40	W-170727-RA-41
Sample Date:	07/21/2017	07/21/2017	07/26/2017	07/27/2017	07/27/2017	07/27/2017
Depth:	58-62 ft	58-62 ft	42-46 ft	46-50 ft	46-50 ft	50-54 ft

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
1,1,2,2-Tetrachloroethane	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
1,1,2-Trichloroethane	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
1,1-Dichloroethane	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
1,1-Dichloroethene	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
1,2,4-Trichlorobenzene	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	5.0 U	2.0 U	2.0 U	500 U	2.0 U	670 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
1,2-Dichlorobenzene	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
1,2-Dichloroethane	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
1,2-Dichloropropane	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
1,3-Dichlorobenzene	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
1,4-Dichlorobenzene	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	10 U	10 U	2500 U	10 U	3300 U
2-Hexanone	µg/L	25 U	10 U	10 U	2500 U	10 U	3300 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	25 U	10 U	10 U	2500 U	10 U	3300 U
Acetone	µg/L	25 U	3.4 J	5.7 J	2500 U	10 U	3300 U
Benzene	µg/L	48	1.0 U	1.0 U	250 U	1.0 U	330 U
Bromodichloromethane	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Bromoform	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Bromomethane (Methyl bromide)	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Carbon disulfide	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Carbon tetrachloride	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Chlorobenzene	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Chloroethane	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Chloroform (Trichloromethane)	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Chloromethane (Methyl chloride)	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
cis-1,2-Dichloroethene	µg/L	2.5 U	1.0 U	2.5	250 U	1.0 U	230 J
cis-1,3-Dichloropropene	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Cyclohexane	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U

**Validated Analytical Results Summary - Water
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Location ID:	SV-4	SV-4	SV-5	SV-5	SV-5	SV-5
Sample Name:	W-170721-RA-23	W-170721-RA-27	W-170726-RA-32	W-170727-RA-39	W-170727-RA-40	W-170727-RA-41
Sample Date:	07/21/2017	07/21/2017	07/26/2017	07/27/2017	07/27/2017	07/27/2017
Depth:	58-62 ft	58-62 ft	42-46 ft	46-50 ft	46-50 ft	50-54 ft

Parameters	Unit						
Dibromochloromethane	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Ethylbenzene	µg/L	14	1.0 U	1.0 U	250 U	1.0 U	330 U
Isopropyl benzene	µg/L	3.6	1.0 U	1.0 U	250 U	1.0 U	330 U
Methyl acetate	µg/L	25 U	10 U	10 U	2500 U	10 U	3300 U
Methyl cyclohexane	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Methyl tert butyl ether (MTBE)	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Methylene chloride	µg/L	2.5 U	1.0 U	1.0 U	290 U	1.0 U	410 U
Naphthalene	µg/L	54	0.34 J	1.0 U	250 U	1.0 U	330 U
Styrene	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Tetrachloroethene	µg/L	2.5 U	1.0 U	3.8	7200	1.0 U	8600
Toluene	µg/L	0.88 J	1.0 U	1.0 U	250 U	1.0 U	330 U
trans-1,2-Dichloroethene	µg/L	13	1.0 U	3.1	250 U	1.0 U	330 U
trans-1,3-Dichloropropene	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Trichloroethene	µg/L	2.5 U	1.0 U	8.4	250 U	1.0 U	210 J
Trichlorofluoromethane (CFC-11)	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Trifluorotrichloroethane (CFC-113)	µg/L	2.5 U	1.0 U	1.0 U	250 U	1.0 U	330 U
Vinyl chloride	µg/L	4.4	1.0 U	1.0 U	250 U	1.0 U	330 U
Xylenes (total)	µg/L	14	2.0 U	2.0 U	500 U	2.0 U	670 U

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
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Location ID:	SV-5	SV-5	SV-5	SV-6	SV-6	SV-6
Sample Name:	W-170727-RA-42	W-170727-RA-43	W-170727-RA-33	W-170719-RA-07	W-170719-RA-08	W-170719-RA-09
Sample Date:	07/27/2017	07/27/2017	07/27/2017	07/19/2017	07/19/2017	07/19/2017
Depth:	50-54 ft Duplicate	54-58 ft	58-62 ft	42-46 ft	46-50 ft	50-54 ft

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
1,1,2-Trichloroethane	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
1,1-Dichloroethane	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
1,1-Dichloroethene	µg/L	330 U	1.9 J	1.0 U	1.0 U	1.1 J	2.4 J
1,2,4-Trichlorobenzene	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 UJ	5.0 UJ
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	670 U	10 U	2.0 U	2.0 U	6.7 U	10 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
1,2-Dichlorobenzene	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 UJ	5.0 UJ
1,2-Dichloroethane	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
1,2-Dichloropropane	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
1,3-Dichlorobenzene	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 UJ	5.0 UJ
1,4-Dichlorobenzene	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 UJ	5.0 UJ
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	3300 U	50 U	10 U	10 U	33 U	50 U
2-Hexanone	µg/L	3300 U	50 U	10 U	10 U	33 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	3300 U	50 U	10 U	10 U	33 U	50 U
Acetone	µg/L	3300 U	50 U	10 U	10 U	33 U	50 U
Benzene	µg/L	330 U	15	24	1.0 U	2.9 J	6.6 J
Bromodichloromethane	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Bromoform	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Carbon disulfide	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Carbon tetrachloride	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Chlorobenzene	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 UJ	5.0 UJ
Chloroethane	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Chloroform (Trichloromethane)	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
cis-1,2-Dichloroethene	µg/L	210 J	150	0.78 J	10	83	150
cis-1,3-Dichloropropene	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Cyclohexane	µg/L	330 U	5.0 U	0.74 J	1.0 U	3.3 U	5.0 U

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
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Location ID:	SV-5	SV-5	SV-5	SV-6	SV-6	SV-6	
Sample Name:	W-170727-RA-42	W-170727-RA-43	W-170727-RA-33	W-170719-RA-07	W-170719-RA-08	W-170719-RA-09	
Sample Date:	07/27/2017	07/27/2017	07/27/2017	07/19/2017	07/19/2017	07/19/2017	
Depth:	50-54 ft Duplicate	54-58 ft	58-62 ft	42-46 ft	46-50 ft	50-54 ft	
Parameters	Unit						
Dibromochloromethane	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Ethylbenzene	µg/L	330 U	5.0 U	7.7	1.0 U	3.3 UJ	5.0 UJ
Isopropyl benzene	µg/L	330 U	5.0 U	2.6	1.0 U	3.3 UJ	5.0 UJ
Methyl acetate	µg/L	3300 U	50 U	10 U	10 U	33 U	50 U
Methyl cyclohexane	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Methyl tert butyl ether (MTBE)	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Methylene chloride	µg/L	400 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Naphthalene	µg/L	330 U	47	21	1.0 U	3.3 UJ	5.0 UJ
Styrene	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 UJ	5.0 UJ
Tetrachloroethene	µg/L	9400	77	8.6	1.0 U	3.3 U	5.0 U
Toluene	µg/L	330 U	5.0 U	0.69 J	1.0 U	3.3 UJ	5.0 UJ
trans-1,2-Dichloroethene	µg/L	330 U	28	6.5	23	43	30
trans-1,3-Dichloropropene	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Trichloroethene	µg/L	210 J	5.0 U	0.36 J	18	7.6	5.0 U
Trichlorofluoromethane (CFC-11)	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	330 U	5.0 U	1.0 U	1.0 U	3.3 U	5.0 U
Vinyl chloride	µg/L	330 U	65	2.0	1.0 U	4.0	11
Xylenes (total)	µg/L	670 U	4.3 J	8.3	2.0 U	6.7 UJ	10 UJ

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	SV-6	SV-6	SV-6	SV-7	SV-7	SV-7
Sample Name:	W-170719-RA-10	W-170719-RA-11	W-170719-RA-12	W-170727-RA-34	W-170727-RA-35	W-170727-RA-36
Sample Date:	07/19/2017	07/19/2017	07/19/2017	07/27/2017	07/27/2017	07/27/2017
Depth:	50-54 ft Duplicate	54-58 ft	58-62 ft	42-46 ft	46-50 ft	50-54 ft

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
1,1,2-Trichloroethane	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
1,1-Dichloroethane	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
1,1-Dichloroethene	µg/L	2.3 J	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	5.0 UJ	2.0 UJ	2.0 UJ	6.3 UJ	6.3 UJ	1.0 UJ
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	10 U	4.0 U	4.0 U	13 U	13 U	2.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
1,2-Dichlorobenzene	µg/L	5.0 UJ	2.0 UJ	2.0 UJ	6.3 UJ	6.3 UJ	1.0 UJ
1,2-Dichloroethane	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
1,2-Dichloropropane	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
1,3-Dichlorobenzene	µg/L	5.0 UJ	2.0 UJ	2.0 UJ	6.3 UJ	6.3 UJ	1.0 UJ
1,4-Dichlorobenzene	µg/L	5.0 UJ	2.0 UJ	2.0 UJ	6.3 UJ	6.3 UJ	1.0 UJ
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	50 U	20 U	20 U	63 U	63 U	10 U
2-Hexanone	µg/L	50 U	20 U	20 U	63 U	63 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	50 U	20 U	20 U	63 U	63 U	10 U
Acetone	µg/L	50 U	20 U	13 J	63 U	63 U	2.1 J
Benzene	µg/L	6.2 J	38 J	48 J	6.2 J	15 J	1.5 J
Bromodichloromethane	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Bromoform	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Carbon disulfide	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Carbon tetrachloride	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Chlorobenzene	µg/L	5.0 UJ	2.0 UJ	2.0 UJ	6.3 UJ	6.3 UJ	1.0 UJ
Chloroethane	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Chloroform (Trichloromethane)	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
cis-1,2-Dichloroethene	µg/L	140	2.0 U	2.0 U	180	150	5.7
cis-1,3-Dichloropropene	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Cyclohexane	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	SV-6	SV-6	SV-6	SV-7	SV-7	SV-7	
Sample Name:	W-170719-RA-10	W-170719-RA-11	W-170719-RA-12	W-170727-RA-34	W-170727-RA-35	W-170727-RA-36	
Sample Date:	07/19/2017	07/19/2017	07/19/2017	07/27/2017	07/27/2017	07/27/2017	
Depth:	50-54 ft Duplicate	54-58 ft	58-62 ft	42-46 ft	46-50 ft	50-54 ft	
Parameters	Unit						
Dibromochloromethane	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Ethylbenzene	µg/L	5.0 UJ	9.9 J	12 J	6.3 UJ	6.3 UJ	1.0 UJ
Isopropyl benzene	µg/L	5.0 UJ	2.4 J	2.6 J	6.3 UJ	6.3 UJ	1.0 UJ
Methyl acetate	µg/L	50 U	20 U	20 U	63 U	63 U	10 U
Methyl cyclohexane	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Methylene chloride	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.6 U	1.0 U
Naphthalene	µg/L	5.0 UJ	21 J	48 J	6.3 UJ	6.3 UJ	1.0 UJ
Styrene	µg/L	5.0 UJ	2.0 UJ	2.0 UJ	6.3 UJ	6.3 UJ	1.0 UJ
Tetrachloroethene	µg/L	5.0 U	0.80 J	2.0 U	6.3 U	6.3 U	1.0 U
Toluene	µg/L	5.0 UJ	0.75 J	0.70 J	6.3 UJ	6.3 UJ	0.36 J
trans-1,2-Dichloroethene	µg/L	29	10	21	110	46	8.3
trans-1,3-Dichloropropene	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Trichloroethene	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Trifluorotrchloroethane (CFC-113)	µg/L	5.0 U	2.0 U	2.0 U	6.3 U	6.3 U	1.0 U
Vinyl chloride	µg/L	10	2.2	5.0	23	35	1.6
Xylenes (total)	µg/L	10 UJ	11 J	11 J	13 UJ	13 UJ	2.0 UJ

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
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Location ID:	SV-7	SV-7	SV-8	SV-8	VAP-11	VAP-11
Sample Name:	W-170727-RA-37	W-170727-RA-38	W-170817-RA-56	W-170817-RA-57	W-170721-RA-25	W-170721-RA-26
Sample Date:	07/27/2017	07/27/2017	08/17/2017	08/17/2017	07/21/2017	07/21/2017
Depth:	54-58 ft	58-62 ft	46-50 ft	54-58 ft	42-46 ft	46-50 ft

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
1,1,2,2-Tetrachloroethane	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
1,1,2-Trichloroethane	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
1,1-Dichloroethane	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
1,1-Dichloroethene	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
1,2,4-Trichlorobenzene	µg/L	2.5 UJ	2.0 U	500 U	1300 U	1.0 U	2.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	5.0 U	4.0 U	1000 U	2500 U	2.0 U	4.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
1,2-Dichlorobenzene	µg/L	2.5 UJ	2.0 U	500 U	1300 U	1.0 U	2.0 U
1,2-Dichloroethane	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
1,2-Dichloropropane	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
1,3-Dichlorobenzene	µg/L	2.5 UJ	2.0 U	500 U	1300 U	1.0 U	2.0 U
1,4-Dichlorobenzene	µg/L	2.5 UJ	2.0 U	500 U	1300 U	1.0 U	2.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	25 U	20 U	5000 U	13000 U	10 U	20 U
2-Hexanone	µg/L	25 U	20 U	5000 U	13000 U	10 U	20 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	25 U	20 U	5000 U	13000 U	10 U	20 U
Acetone	µg/L	25 U	20 U	5000 U	13000 U	10 U	20 U
Benzene	µg/L	45 J	45	500 U	1300 U	1.0 U	2.0 U
Bromodichloromethane	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Bromoform	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Bromomethane (Methyl bromide)	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Carbon disulfide	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Carbon tetrachloride	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Chlorobenzene	µg/L	2.5 UJ	2.0 U	500 U	1300 U	1.0 U	2.0 U
Chloroethane	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Chloroform (Trichloromethane)	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Chloromethane (Methyl chloride)	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
cis-1,2-Dichloroethene	µg/L	2.5 U	22	500 U	1300 U	5.0	36
cis-1,3-Dichloropropene	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Cyclohexane	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	SV-7	SV-7	SV-8	SV-8	VAP-11	VAP-11
Sample Name:	W-170727-RA-37	W-170727-RA-38	W-170817-RA-56	W-170817-RA-57	W-170721-RA-25	W-170721-RA-26
Sample Date:	07/27/2017	07/27/2017	08/17/2017	08/17/2017	07/21/2017	07/21/2017
Depth:	54-58 ft	58-62 ft	46-50 ft	54-58 ft	42-46 ft	46-50 ft

Parameters	Unit						
Dibromochloromethane	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Ethylbenzene	µg/L	11 J	11	500 U	1300 U	1.0 U	2.0 U
Isopropyl benzene	µg/L	2.7 J	2.9	500 U	1300 U	1.0 U	2.0 U
Methyl acetate	µg/L	25 U	20 U	5000 U	13000 U	10 U	20 U
Methyl cyclohexane	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Methyl tert butyl ether (MTBE)	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Methylene chloride	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Naphthalene	µg/L	70 J	58	500 U	1300 U	1.0 U	1.4 J
Styrene	µg/L	2.5 UJ	2.0 U	500 U	1300 U	1.0 U	2.0 U
Tetrachloroethene	µg/L	2.5 U	2.0 U	19000	31000	10	2.1
Toluene	µg/L	0.86 J	0.83 J	500 U	1300 U	0.24 J	2.0 U
trans-1,2-Dichloroethene	µg/L	11	21	500 U	1300 U	12	59
trans-1,3-Dichloropropene	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Trichloroethene	µg/L	2.5 U	2.0 U	500 U	1300 U	12	17
Trichlorofluoromethane (CFC-11)	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	2.5 U	2.0 U	500 U	1300 U	1.0 U	2.0 U
Vinyl chloride	µg/L	2.9	34	500 U	1300 U	1.0 U	0.90 J
Xylenes (total)	µg/L	17 J	15	1000 U	2500 U	2.0 U	4.0 U

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	VAP-11	VAP-11	VAP-11	VAP-11	VAP-11	VAP-12
Sample Name:	W-170721-RA-24	W-170721-RA-28	W-170726-RA-29	W-170726-RA-30	W-170726-RA-31	W-170803-RA-50
Sample Date:	07/21/2017	07/21/2017	07/26/2017	07/26/2017	07/26/2017	08/03/2017
Depth:	46-50 ft	50-54 ft	54-58 ft	63-67 ft	71-75 ft	42-46 ft

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
1,1,2-Trichloroethane	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
1,1-Dichloroethane	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
1,1-Dichloroethene	µg/L	1.0 U	5.0 U	1.9 J	14 U	500 U	10 U
1,2,4-Trichlorobenzene	µg/L	1.0 U	4.7 J	6.7 UJ	14 U	500 UJ	10 UJ
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	2.0 U	10 U	13 U	29 U	1000 U	20 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
1,2-Dichlorobenzene	µg/L	1.0 U	5.0 U	6.7 UJ	14 U	500 UJ	10 UJ
1,2-Dichloroethane	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
1,2-Dichloropropane	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
1,3-Dichlorobenzene	µg/L	1.0 U	5.0 U	6.7 UJ	14 U	500 UJ	10 UJ
1,4-Dichlorobenzene	µg/L	1.0 U	5.0 U	6.7 UJ	14 U	500 UJ	10 UJ
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	50 U	67 U	140 U	5000 U	100 U
2-Hexanone	µg/L	10 U	50 U	67 U	140 U	5000 U	100 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	50 U	67 U	140 U	5000 U	100 U
Acetone	µg/L	10 U	50 U	67 U	140 U	5000 U	100 U
Benzene	µg/L	1.0 U	13	9.0 J	33	500 UJ	10 UJ
Bromodichloromethane	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Bromoform	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Carbon disulfide	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Carbon tetrachloride	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Chlorobenzene	µg/L	1.0 U	5.0 U	6.7 UJ	14 U	500 UJ	10 UJ
Chloroethane	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Chloroform (Trichloromethane)	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Chloromethane (Methyl chloride)	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
cis-1,2-Dichloroethene	µg/L	1.0 U	140	140	350	8900	10 U
cis-1,3-Dichloropropene	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Cyclohexane	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
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Location ID:	VAP-11	VAP-11	VAP-11	VAP-11	VAP-11	VAP-12
Sample Name:	W-170721-RA-24	W-170721-RA-28	W-170726-RA-29	W-170726-RA-30	W-170726-RA-31	W-170803-RA-50
Sample Date:	07/21/2017	07/21/2017	07/26/2017	07/26/2017	07/26/2017	08/03/2017
Depth:	46-50 ft	50-54 ft	54-58 ft	63-67 ft	71-75 ft	42-46 ft

Parameters	Unit						
Dibromochloromethane	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Ethylbenzene	µg/L	1.0 U	5.0 U	6.7 UJ	5.5 J	500 UJ	10 UJ
Isopropyl benzene	µg/L	1.0 U	5.0 U	6.7 UJ	14 U	500 UJ	10 UJ
Methyl acetate	µg/L	10 U	50 U	67 U	140 U	5000 U	100 U
Methyl cyclohexane	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Methyl tert butyl ether (MTBE)	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Methylene chloride	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Naphthalene	µg/L	1.0 U	6.8	6.7 UJ	14 U	500 UJ	10 UJ
Styrene	µg/L	1.0 U	5.0 U	6.7 UJ	14 U	500 UJ	10 UJ
Tetrachloroethene	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	240
Toluene	µg/L	1.0 U	5.0 U	6.7 UJ	14 U	500 UJ	10 UJ
trans-1,2-Dichloroethene	µg/L	1.0 U	71	26	33	270 J	10 U
trans-1,3-Dichloropropene	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Trichloroethene	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	5.0 U	6.7 U	14 U	500 U	10 U
Vinyl chloride	µg/L	1.0 U	34	46	130	500 U	10 U
Xylenes (total)	µg/L	2.0 U	10 U	13 UJ	29 U	1000 UJ	20 UJ

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	VAP-12	VAP-12	VAP-12	VAP-12	VAP-12	VAP-13
Sample Name:	W-170803-RA-51	W-170803-RA-52	W-170803-RA-53	W-170803-RA-54	W-170803-RA-55	W-170801-RA-44
Sample Date:	08/03/2017	08/03/2017	08/03/2017	08/03/2017	08/03/2017	08/01/2017
Depth:	46-50 ft	50-54 ft	54-58 ft	62-67 ft	71-75 ft	42-46 ft

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
1,1,2-Trichloroethane	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
1,1-Dichloroethane	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
1,1-Dichloroethene	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	50 UJ	1000 UJ	13 U	2.0 U	130 UJ	1.0 UJ
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	100 U	2000 U	25 U	4.0 U	250 U	2.0 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
1,2-Dichlorobenzene	µg/L	50 UJ	1000 UJ	13 U	2.0 U	130 UJ	1.0 UJ
1,2-Dichloroethane	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
1,2-Dichloropropane	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
1,3-Dichlorobenzene	µg/L	50 UJ	1000 UJ	13 U	2.0 U	130 UJ	1.0 UJ
1,4-Dichlorobenzene	µg/L	50 UJ	1000 UJ	13 U	2.0 U	130 UJ	1.0 UJ
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	500 U	10000 U	130 U	20 U	1300 U	10 U
2-Hexanone	µg/L	500 U	10000 U	130 U	20 U	1300 U	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	500 U	10000 U	130 U	20 U	1300 U	10 U
Acetone	µg/L	500 U	10000 U	130 U	3.6 J	1300 U	10 U
Benzene	µg/L	50 UJ	1000 UJ	21	32	130 UJ	1.0 UJ
Bromodichloromethane	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Bromoform	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Carbon disulfide	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Carbon tetrachloride	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Chlorobenzene	µg/L	50 UJ	1000 UJ	13 U	2.0 U	130 UJ	1.0 UJ
Chloroethane	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Chloroform (Trichloromethane)	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
cis-1,2-Dichloroethene	µg/L	26 J	1000 U	380	48	3100	1.2
cis-1,3-Dichloropropene	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Cyclohexane	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U

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Location ID:	VAP-12	VAP-12	VAP-12	VAP-12	VAP-12	VAP-13
Sample Name:	W-170803-RA-51	W-170803-RA-52	W-170803-RA-53	W-170803-RA-54	W-170803-RA-55	W-170801-RA-44
Sample Date:	08/03/2017	08/03/2017	08/03/2017	08/03/2017	08/03/2017	08/01/2017
Depth:	46-50 ft	50-54 ft	54-58 ft	62-67 ft	71-75 ft	42-46 ft

Parameters	Unit						
Dibromochloromethane	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Ethylbenzene	µg/L	50 UJ	1000 UJ	13 U	8.8	130 UJ	1.0 UJ
Isopropyl benzene	µg/L	50 UJ	1000 UJ	13 U	1.7 J	130 UJ	1.0 UJ
Methyl acetate	µg/L	500 U	10000 U	130 U	20 U	1300 U	10 U
Methyl cyclohexane	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Methyl tert butyl ether (MTBE)	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Methylene chloride	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Naphthalene	µg/L	50 UJ	1000 UJ	13 U	25	64 J	1.0 UJ
Styrene	µg/L	50 UJ	1000 UJ	13 U	2.0 U	130 UJ	1.0 UJ
Tetrachloroethene	µg/L	1200	40000	9.6 J	22	550	5.8
Toluene	µg/L	50 UJ	1000 UJ	13 U	0.89 J	130 UJ	1.0 UJ
trans-1,2-Dichloroethene	µg/L	45 J	1000 U	63	7.0	84 J	2.1
trans-1,3-Dichloropropene	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Trichloroethene	µg/L	17 J	1000 U	13 U	2.0 U	180	9.0
Trichlorofluoromethane (CFC-11)	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	50 U	1000 U	13 U	2.0 U	130 U	1.0 U
Vinyl chloride	µg/L	50 U	1000 U	150	11	200	1.0 U
Xylenes (total)	µg/L	100 UJ	2000 UJ	25 U	8.1	250 UJ	2.0 UJ

**Validated Analytical Results Summary - Water
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Location ID:	VAP-13	VAP-13	VAP-13	VAP-13	VAP-13	SV-9
Sample Name:	W-170801-RA-45	W-170801-RA-46	W-170801-RA-47	W-170801-RA-48	W-170801-RA-49	W-170717-RA-01
Sample Date:	08/01/2017	08/01/2017	08/01/2017	08/01/2017	08/01/2017	07/17/2017
Depth:	46-50 ft	50-54 ft	54-58 ft	63-67 ft	71-75 ft	42-46 ft

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
1,1,2-Trichloroethane	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
1,1-Dichloroethane	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
1,1-Dichloroethene	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
1,2,4-Trichlorobenzene	µg/L	1.0 UJ	100 U	13 UJ	250 U	50 UJ	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	2.0 U	200 U	27 U	500 U	100 U	10 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
1,2-Dichlorobenzene	µg/L	1.0 UJ	100 U	13 UJ	250 U	50 UJ	5.0 U
1,2-Dichloroethane	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
1,2-Dichloropropane	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
1,3-Dichlorobenzene	µg/L	1.0 UJ	100 U	13 UJ	250 U	50 UJ	5.0 U
1,4-Dichlorobenzene	µg/L	1.0 UJ	100 U	13 UJ	250 U	50 UJ	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	10 U	1000 U	130 U	2500 U	500 U	50 U
2-Hexanone	µg/L	10 U	1000 U	130 U	2500 U	500 U	50 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	10 U	1000 U	130 U	2500 U	500 U	50 U
Acetone	µg/L	10 U	1000 U	130 U	2500 U	500 U	50 U
Benzene	µg/L	1.0 UJ	100 U	15 J	250 U	47 J	5.0 U
Bromodichloromethane	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Bromoform	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Carbon disulfide	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Carbon tetrachloride	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Chlorobenzene	µg/L	1.0 UJ	100 U	13 UJ	250 U	50 UJ	5.0 U
Chloroethane	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Chloroform (Trichloromethane)	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
cis-1,2-Dichloroethene	µg/L	19	100	430	250 U	1000	5.0 U
cis-1,3-Dichloropropene	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Cyclohexane	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	VAP-13	VAP-13	VAP-13	VAP-13	VAP-13	SV-9
Sample Name:	W-170801-RA-45	W-170801-RA-46	W-170801-RA-47	W-170801-RA-48	W-170801-RA-49	W-170717-RA-01
Sample Date:	08/01/2017	08/01/2017	08/01/2017	08/01/2017	08/01/2017	07/17/2017
Depth:	46-50 ft	50-54 ft	54-58 ft	63-67 ft	71-75 ft	42-46 ft

Parameters	Unit						
Dibromochloromethane	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Ethylbenzene	µg/L	1.0 UJ	100 U	13 UJ	250 U	50 UJ	5.0 U
Isopropyl benzene	µg/L	1.0 UJ	100 U	13 UJ	250 U	50 UJ	5.0 U
Methyl acetate	µg/L	10 U	1000 U	130 U	2500 U	500 U	50 U
Methyl cyclohexane	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Methyl tert butyl ether (MTBE)	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Methylene chloride	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Naphthalene	µg/L	1.0 UJ	100 U	13 UJ	250 U	50 UJ	5.0 U
Styrene	µg/L	1.0 UJ	100 U	13 UJ	250 U	50 UJ	5.0 U
Tetrachloroethene	µg/L	11	2500	9.2 J	5400	61	180
Toluene	µg/L	0.25 J	100 U	13 UJ	250 U	50 UJ	5.0 U
trans-1,2-Dichloroethene	µg/L	33	77 J	86	250 U	54	5.0 U
trans-1,3-Dichloropropene	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Trichloroethene	µg/L	20	95 J	13 U	250 U	50 U	2.9 J
Trichlorofluoromethane (CFC-11)	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Trifluorotrichloroethane (CFC-113)	µg/L	1.0 U	100 U	13 U	250 U	50 U	5.0 U
Vinyl chloride	µg/L	1.0 U	100 U	70	250 U	170	5.0 U
Xylenes (total)	µg/L	2.0 UJ	200 U	27 UJ	500 U	100 UJ	10 U

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID: Sample Name: Sample Date: Depth:	SV-9 W-170717-RA-02 07/17/2017 46-50 ft	SV-9 W-170717-RA-03 07/17/2017 50-54 ft	SV-9 W-170717-RA-04 07/17/2017 54-58 ft	SV-9 W-170717-RA-05 07/17/2017 58-62 ft	SV-9 W-170717-RA-06 07/17/2017 58-62 ft Duplicate	
Parameters	Unit					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	100 U	500 U	1000 U	2500 U	2500 U
1,1,1,2,2-Tetrachloroethane	µg/L	100 U	500 U	1000 U	2500 U	2500 U
1,1,2-Trichloroethane	µg/L	100 U	500 U	1000 U	2500 U	2500 U
1,1-Dichloroethane	µg/L	100 U	500 U	1000 U	2500 U	2500 U
1,1-Dichloroethene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
1,2,4-Trichlorobenzene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	200 U	1000 U	2000 U	5000 U	5000 U
1,2-Dibromoethane (Ethylene dibromide)	µg/L	100 U	500 U	1000 U	2500 U	2500 U
1,2-Dichlorobenzene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
1,2-Dichloroethane	µg/L	100 U	500 U	1000 U	2500 U	2500 U
1,2-Dichloropropane	µg/L	100 U	500 U	1000 U	2500 U	2500 U
1,3-Dichlorobenzene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
1,4-Dichlorobenzene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	1000 U	5000 U	10000 U	25000 U	25000 U
2-Hexanone	µg/L	1000 U	5000 U	10000 U	25000 U	25000 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	1000 U	5000 U	10000 U	25000 U	25000 U
Acetone	µg/L	1000 U	5000 U	10000 U	25000 U	25000 U
Benzene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Bromodichloromethane	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Bromoform	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Bromomethane (Methyl bromide)	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Carbon disulfide	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Carbon tetrachloride	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Chlorobenzene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Chloroethane	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Chloroform (Trichloromethane)	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Chloromethane (Methyl chloride)	µg/L	100 U	500 U	1000 U	2500 U	2500 U
cis-1,2-Dichloroethene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
cis-1,3-Dichloropropene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Cyclohexane	µg/L	100 U	500 U	1000 U	2500 U	2500 U

**Validated Analytical Results Summary - Water
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID: Sample Name: Sample Date: Depth:	SV-9 W-170717-RA-02 07/17/2017 46-50 ft	SV-9 W-170717-RA-03 07/17/2017 50-54 ft	SV-9 W-170717-RA-04 07/17/2017 54-58 ft	SV-9 W-170717-RA-05 07/17/2017 58-62 ft	SV-9 W-170717-RA-06 07/17/2017 58-62 ft Duplicate	
Parameters	Unit					
Dibromochloromethane	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Dichlorodifluoromethane (CFC-12)	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Ethylbenzene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Isopropyl benzene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Methyl acetate	µg/L	1000 U	5000 U	10000 U	25000 U	25000 U
Methyl cyclohexane	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Methyl tert butyl ether (MTBE)	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Methylene chloride	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Naphthalene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Styrene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Tetrachloroethene	µg/L	2400	15000	16000	47000	48000
Toluene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
trans-1,2-Dichloroethene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
trans-1,3-Dichloropropene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Trichloroethene	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Trichlorofluoromethane (CFC-11)	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Trifluorotrichloroethane (CFC-113)	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Vinyl chloride	µg/L	100 U	500 U	1000 U	2500 U	2500 U
Xylenes (total)	µg/L	200 U	1000 U	2000 U	5000 U	5000 U

Notes:

- J - Estimated concentration
- U - Not detected at the associated reporting limit
- UJ - Not detected; associated reporting limit is estimated

**Validated Analytical Results Summary - Soil
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	SV-2	SV-2	SV-9	SV-4	SV-6	SV-7
Sample Name:	S-170718-RA-02	S-170718-RA-03	S-170717-RA-01	S-170726-RA-12	S-170720-RA-08	S-170727-RA-13
Sample Date:	07/18/2017	07/18/2017	07/17/2017	07/26/2017	07/20/2017	07/28/2017
Depth:	1-4.5 ft	15 ft	1-3 ft	20 ft	51-52 ft	53 ft

Parameters	Unit	SV-2	SV-2	SV-9	SV-4	SV-6	SV-7
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
1,1,2,2-Tetrachloroethane	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
1,1,2-Trichloroethane	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
1,1-Dichloroethane	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
1,1-Dichloroethene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	1.1 J	0.77 J
1,2,4-Trichlorobenzene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	11 U	9.6 U	8.2 U	610 U	9.0 U	9.2 U
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
1,2-Dichlorobenzene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
1,2-Dichloroethane	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
1,2-Dichloropropane	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
1,3-Dichlorobenzene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
1,4-Dichlorobenzene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	21 U	19 U	16 U	1200 U	18 U	18 U
2-Hexanone	µg/kg	21 U	19 U	16 U	1200 U	18 U	18 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	21 U	19 U	16 U	1200 U	18 U	18 U
Acetone	µg/kg	21 U	19 U	16 U	1200 U	4.1 J	18 U
Benzene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5	5.6
Bromodichloromethane	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Bromoform	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Bromomethane (Methyl bromide)	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Carbon disulfide	µg/kg	5.3 U	4.8 U	4.1 U	310 U	0.62 J	4.6 U
Carbon tetrachloride	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Chlorobenzene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Chloroethane	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Chloroform (Trichloromethane)	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Chloromethane (Methyl chloride)	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
cis-1,2-Dichloroethene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	98	67

**Validated Analytical Results Summary - Soil
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	SV-2	SV-2	SV-9	SV-4	SV-6	SV-7
Sample Name:	S-170718-RA-02	S-170718-RA-03	S-170717-RA-01	S-170726-RA-12	S-170720-RA-08	S-170727-RA-13
Sample Date:	07/18/2017	07/18/2017	07/17/2017	07/26/2017	07/20/2017	07/28/2017
Depth:	1-4.5 ft	15 ft	1-3 ft	20 ft	51-52 ft	53 ft

Parameters	Unit	SV-2	SV-2	SV-9	SV-4	SV-6	SV-7
cis-1,3-Dichloropropene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Cyclohexane	µg/kg	11 U	9.6 U	8.2 U	610 U	9.0 U	0.88 J
Dibromochloromethane	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Dichlorodifluoromethane (CFC-12)	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Ethylbenzene	µg/kg	0.33 J	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Isopropyl benzene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	0.74 J	0.21 J
Methyl acetate	µg/kg	27 U	24 U	21 U	3600 J	23 U	23 U
Methyl cyclohexane	µg/kg	11 U	9.6 U	8.2 U	610 U	1.6 J	2.2 J
Methyl tert butyl ether (MTBE)	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Methylene chloride	µg/kg	5.3 U	4.8 U	4.1 U	180 J	3.1 U	4.6 U
Naphthalene	µg/kg	5.3 U	4.8 U	4.1 U	97 J	6.2	4.6 U
Styrene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Tetrachloroethene	µg/kg	4.5 J	0.78 J	4.1 U	920 J	4.5 U	4.6 U
Toluene	µg/kg	1.2 J	0.74 J	4.1 U	310 U	0.74 J	0.55 J
trans-1,2-Dichloroethene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	14	23
trans-1,3-Dichloropropene	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Trichloroethene	µg/kg	5.3 U	4.8 U	0.74 J	310 U	0.63 J	0.57 J
Trichlorofluoromethane (CFC-11)	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Trifluorotrchloroethane (CFC-113)	µg/kg	5.3 U	4.8 U	4.1 U	310 U	4.5 U	4.6 U
Vinyl chloride	µg/kg	5.3 U	4.8 U	4.1 U	310 U	8.8	6.8
Xylenes (total)	µg/kg	1.5 J	9.6 U	8.2 U	610 U	3.3 J	0.50 J

**Validated Analytical Results Summary - Soil
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	VAP-11	VAP-11	VAP-11	VAP-11	VAP-11	VAP-11
Sample Name:	S-170720-RA-04	S-170720-RA-05	S-170720-RA-06	S-170720-RA-07	S-170720-RA-09	S-170720-RA-10
Sample Date:	07/20/2017	07/20/2017	07/20/2017	07/20/2017	07/20/2017	07/20/2017
Depth:	1-3.5 ft	4-7 ft	25 ft	35 ft	49 ft	69 ft

Parameters	Unit					
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
1,1,2,2-Tetrachloroethane	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
1,1,2-Trichloroethane	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
1,1-Dichloroethane	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
1,1-Dichloroethene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
1,2,4-Trichlorobenzene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	790 U	12 U	510 U	8.2 U	460 U 8.7 UJ
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
1,2-Dichlorobenzene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
1,2-Dichloroethane	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
1,2-Dichloropropane	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
1,3-Dichlorobenzene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
1,4-Dichlorobenzene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	1600 U	3.2 J	1000 U	16 U	920 U 17 UJ
2-Hexanone	µg/kg	1600 U	24 U	1000 U	16 U	920 U 17 UJ
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	510 J	1.2 J	1000 U	16 U	920 U 17 UJ
Acetone	µg/kg	1600 U	25	1000 U	7.5 J	920 U 17 UJ
Benzene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 J
Bromodichloromethane	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
Bromoform	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
Bromomethane (Methyl bromide)	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 UJ
Carbon disulfide	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 0.25 J
Carbon tetrachloride	µg/kg	400 U	6.1 U	250 U	0.20 J	230 U 4.3 U
Chlorobenzene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 U
Chloroethane	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 U
Chloroform (Trichloromethane)	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 U
Chloromethane (Methyl chloride)	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U 4.3 U
cis-1,2-Dichloroethene	µg/kg	400 U	6.1 U	250 U	4.1 U	34 J 40 J

**Validated Analytical Results Summary - Soil
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	VAP-11	VAP-11	VAP-11	VAP-11	VAP-11	VAP-11
Sample Name:	S-170720-RA-04	S-170720-RA-05	S-170720-RA-06	S-170720-RA-07	S-170720-RA-09	S-170720-RA-10
Sample Date:	07/20/2017	07/20/2017	07/20/2017	07/20/2017	07/20/2017	07/20/2017
Depth:	1-3.5 ft	4-7 ft	25 ft	35 ft	49 ft	69 ft

Parameters	Unit						
cis-1,3-Dichloropropene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	4.3 UJ
Cyclohexane	µg/kg	790 U	12 U	510 U	8.2 U	460 U	8.7 UJ
Dibromochloromethane	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	4.3 UJ
Dichlorodifluoromethane (CFC-12)	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	4.3 UJ
Ethylbenzene	µg/kg	470 J	6.1 U	250 U	4.1 U	230 U	0.90 J
Isopropyl benzene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	0.32 J
Methyl acetate	µg/kg	2000 U	30 U	1300 U	20 U	1100 U	22 UJ
Methyl cyclohexane	µg/kg	790 U	12 U	510 U	8.2 U	460 U	8.7 UJ
Methyl tert butyl ether (MTBE)	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	4.3 UJ
Methylene chloride	µg/kg	400 U	4.6 U	260 U	2.4 U	250 U	4.3 UJ
Naphthalene	µg/kg	400 U	2.3 J	250 U	4.1 U	230 U	4.3 UJ
Styrene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	4.3 UJ
Tetrachloroethene	µg/kg	81 J	0.86 J	1100	1.1 J	360	4.3 UJ
Toluene	µg/kg	400 U	0.51 J	250 U	0.34 J	230 U	0.45 J
trans-1,2-Dichloroethene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	4.5 J
trans-1,3-Dichloropropene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	4.3 UJ
Trichloroethene	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	4.3 UJ
Trichlorofluoromethane (CFC-11)	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	4.3 UJ
Trifluorotrchloroethane (CFC-113)	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	4.3 UJ
Vinyl chloride	µg/kg	400 U	6.1 U	250 U	4.1 U	230 U	12 J
Xylenes (total)	µg/kg	2800 J	1.5 J	510 U	8.2 U	460 U	0.39 J

**Validated Analytical Results Summary - Soil
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	VAP-11	VAP-12	VAP-12	VAP-12	VAP-13	VAP-13
Sample Name:	S-170720-RA-11	S-170804-RA-19	S-170804-RA-20	S-170804-RA-21	S-170802-RA-14	S-170802-RA-15
Sample Date:	07/20/2017	08/04/2017	08/04/2017	08/04/2017	08/02/2017	08/02/2017
Depth:	74 ft	1-3.5 ft	4-7 ft	25 ft	10-10.5 ft	15.5-16 ft

Parameters	Unit						
Volatile Organic Compounds							
1,1,1-Trichloroethane	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
1,1,2,2-Tetrachloroethane	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
1,1,2-Trichloroethane	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
1,1-Dichloroethane	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
1,1-Dichloroethene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
1,2,4-Trichlorobenzene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	460 U	13 U	7.4 U	11 U	480 U	9.3 U
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
1,2-Dichlorobenzene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
1,2-Dichloroethane	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
1,2-Dichloropropane	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
1,3-Dichlorobenzene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
1,4-Dichlorobenzene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	920 U	25 U	15 U	21 U	960 U	19 U
2-Hexanone	µg/kg	920 U	25 U	0.81 J	21 U	960 U	19 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	920 U	25 U	1.9 J	21 U	960 U	19 U
Acetone	µg/kg	920 U	25 U	19	21 U	960 U	19 U
Benzene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Bromodichloromethane	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Bromoform	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Bromomethane (Methyl bromide)	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Carbon disulfide	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Carbon tetrachloride	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Chlorobenzene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Chloroethane	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Chloroform (Trichloromethane)	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Chloromethane (Methyl chloride)	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
cis-1,2-Dichloroethene	µg/kg	2000 J	6.4 U	3.7 U	5.4 U	240 U	4.6 U

**Validated Analytical Results Summary - Soil
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	VAP-11	VAP-12	VAP-12	VAP-12	VAP-13	VAP-13
Sample Name:	S-170720-RA-11	S-170804-RA-19	S-170804-RA-20	S-170804-RA-21	S-170802-RA-14	S-170802-RA-15
Sample Date:	07/20/2017	08/04/2017	08/04/2017	08/04/2017	08/02/2017	08/02/2017
Depth:	74 ft	1-3.5 ft	4-7 ft	25 ft	10-10.5 ft	15.5-16 ft

Parameters	Unit	VAP-11	VAP-12	VAP-12	VAP-12	VAP-13	VAP-13
cis-1,3-Dichloropropene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Cyclohexane	µg/kg	460 U	13 U	7.4 U	11 U	480 U	9.3 U
Dibromochloromethane	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Dichlorodifluoromethane (CFC-12)	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Ethylbenzene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Isopropyl benzene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Methyl acetate	µg/kg	1100 U	32 U	18 U	27 U	1200 U	23 U
Methyl cyclohexane	µg/kg	460 U	13 U	7.4 U	11 U	480 U	9.3 U
Methyl tert butyl ether (MTBE)	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Methylene chloride	µg/kg	230 U	6.4 U	0.55 J	5.4 U	240 U	4.6 U
Naphthalene	µg/kg	230 U	0.80 J	0.46 J	5.4 U	240 U	4.6 U
Styrene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Tetrachloroethene	µg/kg	230 U	8.9	3.7 U	2.1 J	2100	110
Toluene	µg/kg	230 U	6.4 U	3.7 U	0.39 J	240 U	0.37 J
trans-1,2-Dichloroethene	µg/kg	76 J	6.4 U	3.7 U	5.4 U	240 U	4.6 U
trans-1,3-Dichloropropene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Trichloroethene	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Trichlorofluoromethane (CFC-11)	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Trifluorotrchloroethane (CFC-113)	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Vinyl chloride	µg/kg	230 U	6.4 U	3.7 U	5.4 U	240 U	4.6 U
Xylenes (total)	µg/kg	460 U	13 U	7.4 U	11 U	480 U	9.3 U

**Validated Analytical Results Summary - Soil
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	VAP-13	VAP-13	VAP-13
Sample Name:	S-170802-RA-16	S-170802-RA-17	S-170802-RA-18
Sample Date:	08/02/2017	08/02/2017	08/02/2017
Depth:	25-26 ft	35-36 ft	70-75 ft

Parameters	Unit			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/kg	4.0 U	4.2 U	310 U
1,1,1,2-Tetrachloroethane	µg/kg	4.0 U	4.2 U	310 U
1,1,2-Trichloroethane	µg/kg	4.0 U	4.2 U	310 U
1,1-Dichloroethane	µg/kg	4.0 U	4.2 U	310 U
1,1-Dichloroethene	µg/kg	4.0 U	4.2 U	310 U
1,2,4-Trichlorobenzene	µg/kg	4.0 U	4.2 U	310 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	8.0 U	8.5 U	610 U
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	4.0 U	4.2 U	310 U
1,2-Dichlorobenzene	µg/kg	4.0 U	4.2 U	310 U
1,2-Dichloroethane	µg/kg	4.0 U	4.2 U	310 U
1,2-Dichloropropane	µg/kg	4.0 U	4.2 U	310 U
1,3-Dichlorobenzene	µg/kg	4.0 U	4.2 U	310 U
1,4-Dichlorobenzene	µg/kg	4.0 U	4.2 U	310 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	16 U	17 U	1200 U
2-Hexanone	µg/kg	16 U	17 U	1200 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	16 U	17 U	49 J
Acetone	µg/kg	16 U	8.9 J	1200 U
Benzene	µg/kg	4.0 U	4.2 U	310 U
Bromodichloromethane	µg/kg	4.0 U	4.2 U	310 U
Bromoform	µg/kg	4.0 U	4.2 U	310 U
Bromomethane (Methyl bromide)	µg/kg	4.0 U	4.2 U	310 U
Carbon disulfide	µg/kg	4.0 U	4.2 U	310 U
Carbon tetrachloride	µg/kg	4.0 U	4.2 U	310 U
Chlorobenzene	µg/kg	4.0 U	4.2 U	310 U
Chloroethane	µg/kg	4.0 U	4.2 U	310 U
Chloroform (Trichloromethane)	µg/kg	4.0 U	4.2 U	310 U
Chloromethane (Methyl chloride)	µg/kg	4.0 U	4.2 U	310 U
cis-1,2-Dichloroethene	µg/kg	4.0 U	4.2 U	140 J

**Validated Analytical Results Summary - Soil
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Location ID:	VAP-13	VAP-13	VAP-13
Sample Name:	S-170802-RA-16	S-170802-RA-17	S-170802-RA-18
Sample Date:	08/02/2017	08/02/2017	08/02/2017
Depth:	25-26 ft	35-36 ft	70-75 ft

Parameters	Unit			
cis-1,3-Dichloropropene	µg/kg	4.0 U	4.2 U	310 U
Cyclohexane	µg/kg	8.0 U	8.5 U	610 U
Dibromochloromethane	µg/kg	4.0 U	4.2 U	310 U
Dichlorodifluoromethane (CFC-12)	µg/kg	4.0 U	4.2 U	310 U
Ethylbenzene	µg/kg	4.0 U	4.2 U	310 U
Isopropyl benzene	µg/kg	4.0 U	4.2 U	310 U
Methyl acetate	µg/kg	20 U	21 U	1500 U
Methyl cyclohexane	µg/kg	8.0 U	8.5 U	610 U
Methyl tert butyl ether (MTBE)	µg/kg	4.0 U	4.2 U	310 U
Methylene chloride	µg/kg	4.0 U	4.2 U	310 U
Naphthalene	µg/kg	4.0 U	4.2 U	310 U
Styrene	µg/kg	4.0 U	4.2 U	310 U
Tetrachloroethene	µg/kg	86	14	960
Toluene	µg/kg	0.27 J	4.2 U	310 U
trans-1,2-Dichloroethene	µg/kg	4.0 U	4.2 U	310 U
trans-1,3-Dichloropropene	µg/kg	4.0 U	4.2 U	310 U
Trichloroethene	µg/kg	4.0 U	4.2 U	310 U
Trichlorofluoromethane (CFC-11)	µg/kg	4.0 U	4.2 U	310 U
Trifluorotrchloroethane (CFC-113)	µg/kg	4.0 U	4.2 U	310 U
Vinyl chloride	µg/kg	4.0 U	4.2 U	310 U
Xylenes (total)	µg/kg	8.0 U	8.5 U	260 J

Notes:

J	- Estimated concentration
U	- Not detected at the associated reporting limit
UJ	- Not detected; associated reporting limit is estimated

Table 3

**Analytical Methods and Holding Time Criteria
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Method	Matrix	Holding Time	
			Collection to Preservation (Days)	Collection or Preservation to Analysis (Days)
VOC	SW-846 8260B	Water	-	14
		Soil	48 hours	14

Notes:

Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

VOC - Volatile Organic Compounds

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	W-170803-RA-50	8	7	1,2,4-Trichlorobenzene	10 UJ	ug/L
				1,2-Dichlorobenzene	10 UJ	ug/L
				1,3-Dichlorobenzene	10 UJ	ug/L
				1,4-Dichlorobenzene	10 UJ	ug/L
				Benzene	10 UJ	ug/L
				Chlorobenzene	10 UJ	ug/L
				Ethylbenzene	10 UJ	ug/L
				Isopropyl benzene	10 UJ	ug/L
				Naphthalene	10 UJ	ug/L
				Styrene	10 UJ	ug/L
				Toluene	10 UJ	ug/L
				Xylenes (total)	20 UJ	ug/L
				VOC	W-170803-RA-51	11
1,2-Dichlorobenzene	50 UJ	ug/L				
1,3-Dichlorobenzene	50 UJ	ug/L				
1,4-Dichlorobenzene	50 UJ	ug/L				
Benzene	50 UJ	ug/L				
Chlorobenzene	50 UJ	ug/L				
Ethylbenzene	50 UJ	ug/L				
Isopropyl benzene	50 UJ	ug/L				
Naphthalene	50 UJ	ug/L				
Styrene	50 UJ	ug/L				
Toluene	50 UJ	ug/L				
Xylenes (total)	100 UJ	ug/L				
VOC	W-170803-RA-52	8	7			
				1,2-Dichlorobenzene	1000 UJ	ug/L
				1,3-Dichlorobenzene	1000 UJ	ug/L
				1,4-Dichlorobenzene	1000 UJ	ug/L

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units				
VOC	W-170803-RA-52	8	7	Benzene	1000 UJ	ug/L				
				Chlorobenzene	1000 UJ	ug/L				
				Ethylbenzene	1000 UJ	ug/L				
				Isopropyl benzene	1000 UJ	ug/L				
				Naphthalene	1000 UJ	ug/L				
				Styrene	1000 UJ	ug/L				
				Toluene	1000 UJ	ug/L				
				Xylenes (total)	2000 UJ	ug/L				
VOC	W-170803-RA-55	8	7	1,2,4-Trichlorobenzene	130 UJ	ug/L				
				1,2-Dichlorobenzene	130 UJ	ug/L				
				1,3-Dichlorobenzene	130 UJ	ug/L				
				1,4-Dichlorobenzene	130 UJ	ug/L				
				Benzene	130 UJ	ug/L				
				Chlorobenzene	130 UJ	ug/L				
				Ethylbenzene	130 UJ	ug/L				
				Isopropyl benzene	130 UJ	ug/L				
				Naphthalene	64 J	ug/L				
				Styrene	130 UJ	ug/L				
				Toluene	130 UJ	ug/L				
				Xylenes (total)	250 UJ	ug/L				
				VOC	W-170719-RA-08	12	7	1,2,4-Trichlorobenzene	3.3 UJ	ug/L
								1,2-Dichlorobenzene	3.3 UJ	ug/L
1,3-Dichlorobenzene	3.3 UJ	ug/L								
1,4-Dichlorobenzene	3.3 UJ	ug/L								
Benzene	2.9 J	ug/L								
Chlorobenzene	3.3 UJ	ug/L								
Ethylbenzene	3.3 UJ	ug/L								
Isopropyl benzene	3.3 UJ	ug/L								

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	W-170719-RA-08	12	7	Naphthalene	3.3 UJ	ug/L
				Styrene	3.3 UJ	ug/L
				Toluene	3.3 UJ	ug/L
				Xylenes (total)	6.7 UJ	ug/L
VOC	W-170719-RA-09	12	7	1,2,4-Trichlorobenzene	5.0 UJ	ug/L
				1,2-Dichlorobenzene	5.0 UJ	ug/L
				1,3-Dichlorobenzene	5.0 UJ	ug/L
				1,4-Dichlorobenzene	5.0 UJ	ug/L
				Benzene	6.6 J	ug/L
				Chlorobenzene	5.0 UJ	ug/L
				Ethylbenzene	5.0 UJ	ug/L
				Isopropyl benzene	5.0 UJ	ug/L
				Naphthalene	5.0 UJ	ug/L
				Styrene	5.0 UJ	ug/L
				Toluene	5.0 UJ	ug/L
				Xylenes (total)	10 UJ	ug/L
				VOC	W-170719-RA-10	12
1,2-Dichlorobenzene	5.0 UJ	ug/L				
1,3-Dichlorobenzene	5.0 UJ	ug/L				
1,4-Dichlorobenzene	5.0 UJ	ug/L				
Benzene	6.2 J	ug/L				
Chlorobenzene	5.0 UJ	ug/L				
Ethylbenzene	5.0 UJ	ug/L				
Isopropyl benzene	5.0 UJ	ug/L				
Naphthalene	5.0 UJ	ug/L				
Styrene	5.0 UJ	ug/L				
Toluene	5.0 UJ	ug/L				
Xylenes (total)	10 UJ	ug/L				

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	W-170719-RA-11	13	7	1,2,4-Trichlorobenzene	2.0 UJ	ug/L
				1,2-Dichlorobenzene	2.0 UJ	ug/L
				1,3-Dichlorobenzene	2.0 UJ	ug/L
				1,4-Dichlorobenzene	2.0 UJ	ug/L
				Benzene	38 J	ug/L
				Chlorobenzene	2.0 UJ	ug/L
				Ethylbenzene	9.9 J	ug/L
				Isopropyl benzene	2.4 J	ug/L
				Naphthalene	21 J	ug/L
				Styrene	2.0 UJ	ug/L
				Toluene	0.75 J	ug/L
				Xylenes (total)	11 J	ug/L
VOC	W-170719-RA-12	13	7	1,2,4-Trichlorobenzene	2.0 UJ	ug/L
				1,2-Dichlorobenzene	2.0 UJ	ug/L
				1,3-Dichlorobenzene	2.0 UJ	ug/L
				1,4-Dichlorobenzene	2.0 UJ	ug/L
				Benzene	48 J	ug/L
				Chlorobenzene	2.0 UJ	ug/L
				Ethylbenzene	12 J	ug/L
				Isopropyl benzene	2.6 J	ug/L
				Naphthalene	48 J	ug/L
				Styrene	2.0 UJ	ug/L
				Toluene	0.7 J	ug/L
				Xylenes (total)	11 J	ug/L
VOC	W-170719-RA-13	12	7	1,2,4-Trichlorobenzene	200 UJ	ug/L
				1,2-Dichlorobenzene	200 UJ	ug/L
				1,3-Dichlorobenzene	200 UJ	ug/L
				1,4-Dichlorobenzene	200 UJ	ug/L
				Benzene	200 UJ	ug/L

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	W-170719-RA-13	12	7	Chlorobenzene	200 UJ	ug/L
				Ethylbenzene	200 UJ	ug/L
				Isopropyl benzene	200 UJ	ug/L
				Naphthalene	1100 J	ug/L
				Styrene	200 UJ	ug/L
				Toluene	200 UJ	ug/L
				Xylenes (total)	400 UJ	ug/L
VOC	W-170719-RA-14	13	7	1,2,4-Trichlorobenzene	2000 UJ	ug/L
				1,2-Dichlorobenzene	2000 UJ	ug/L
				1,3-Dichlorobenzene	2000 UJ	ug/L
				1,4-Dichlorobenzene	2000 UJ	ug/L
				Benzene	2000 UJ	ug/L
				Chlorobenzene	2000 UJ	ug/L
				Ethylbenzene	2000 UJ	ug/L
				Isopropyl benzene	2000 UJ	ug/L
				Naphthalene	1600 J	ug/L
				Styrene	2000 UJ	ug/L
				Toluene	2000 UJ	ug/L
				Xylenes (total)	4000 UJ	ug/L
				VOC	W-170719-RA-15	12
1,2-Dichlorobenzene	140 UJ	ug/L				
1,3-Dichlorobenzene	140 UJ	ug/L				
1,4-Dichlorobenzene	140 UJ	ug/L				
Benzene	140 UJ	ug/L				
Chlorobenzene	140 UJ	ug/L				
Ethylbenzene	140 UJ	ug/L				

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	W-170719-RA-15	12	7	Isopropyl benzene	140 UJ	ug/L
				Naphthalene	140 UJ	ug/L
				Styrene	140 UJ	ug/L
				Toluene	140 UJ	ug/L
				Xylenes (total)	290 UJ	ug/L
				1,2,4-Trichlorobenzene	1.0 UJ	ug/L
				1,2-Dichlorobenzene	1.0 UJ	ug/L
				1,3-Dichlorobenzene	1.0 UJ	ug/L
				1,4-Dichlorobenzene	1.0 UJ	ug/L
				Benzene	1.0 UJ	ug/L
				Chlorobenzene	1.0 UJ	ug/L
				Ethylbenzene	1.0 UJ	ug/L
				Isopropyl benzene	1.0 UJ	ug/L
				Naphthalene	1.0 UJ	ug/L
				Styrene	1.0 UJ	ug/L
				Toluene	1.0 UJ	ug/L
				Xylenes (total)	2.0 UJ	ug/L
				1,2,4-Trichlorobenzene	20 UJ	ug/L
				1,2-Dichlorobenzene	20 UJ	ug/L
				1,3-Dichlorobenzene	20 UJ	ug/L
				1,4-Dichlorobenzene	20 UJ	ug/L
				Benzene	20 UJ	ug/L
				Chlorobenzene	20 UJ	ug/L
				Ethylbenzene	20 UJ	ug/L
				Isopropyl benzene	20 UJ	ug/L
				Naphthalene	20 UJ	ug/L
				Styrene	20 UJ	ug/L
				Toluene	20 UJ	ug/L
				Xylenes (total)	40 UJ	ug/L

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	W-170719-RA-18	12	7	1,2,4-Trichlorobenzene	20 UJ	ug/L
				1,2-Dichlorobenzene	20 UJ	ug/L
				1,3-Dichlorobenzene	20 UJ	ug/L
				1,4-Dichlorobenzene	20 UJ	ug/L
				Benzene	15 J	ug/L
				Chlorobenzene	20 UJ	ug/L
				Ethylbenzene	20 UJ	ug/L
				Isopropyl benzene	20 UJ	ug/L
				Naphthalene	6.7 J	ug/L
				Styrene	20 UJ	ug/L
				Toluene	20 UJ	ug/L
				Xylenes (total)	40 UJ	ug/L
				VOC	S-170720-RA-10	49 hours- to preservation
1,1,2,2-Tetrachloroethane	4.3 UJ	ug/Kg				
1,1,2-Trichloroethane	4.3 UJ	ug/Kg				
1,1-Dichloroethane	4.3 UJ	ug/Kg				
1,1-Dichloroethene	4.3 UJ	ug/Kg				
1,2,4-Trichlorobenzene	4.3 UJ	ug/Kg				
1,2-Dibromo-3-chloropropane (DBCP)	8.7 UJ	ug/Kg				
1,2-Dibromoethane (Ethylene dibromide)	4.3 UJ	ug/Kg				
1,2-Dichlorobenzene	4.3 UJ	ug/Kg				
1,2-Dichloroethane	4.3 UJ	ug/Kg				
1,2-Dichloropropane	4.3 UJ	ug/Kg				
1,3-Dichlorobenzene	4.3 UJ	ug/Kg				
1,4-Dichlorobenzene	4.3 UJ	ug/Kg				
2-Butanone						
(Methyl ethyl ketone) (MEK)	17 UJ	ug/Kg				
2-Hexanone	17 UJ	ug/Kg				

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	S-170720-RA-10	49 hours- to preservation	48 hours- to preservation	4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	17 UJ	ug/Kg
				Acetone	17 UJ	ug/Kg
				Benzene	4.3 J	ug/Kg
				Bromodichloromethane	4.3 UJ	ug/Kg
				Bromoform	4.3 UJ	ug/Kg
				Bromomethane (Methyl bromide)	4.3 UJ	ug/Kg
				Carbon disulfide	0.25 J	ug/Kg
				Carbon tetrachloride	4.3 UJ	ug/Kg
				Chlorobenzene	4.3 UJ	ug/Kg
				Chloroethane	4.3 UJ	ug/Kg
				Chloroform (Trichloromethane)	4.3 UJ	ug/Kg
				Chloromethane (Methyl chloride)	4.3 UJ	ug/Kg
				cis-1,2-Dichloroethene	40 J	ug/Kg
				cis-1,3-Dichloropropene	4.3 UJ	ug/Kg
				Cyclohexane	8.7 UJ	ug/Kg
				Dibromochloromethane	4.3 UJ	ug/Kg
				Dichlorodifluoromethane (CFC-12)	4.3 UJ	ug/Kg
				Ethylbenzene	0.90 J	ug/Kg
				Isopropyl benzene	0.32 J	ug/Kg
				Methyl acetate	22 UJ	ug/Kg
				Methyl cyclohexane	8.7 UJ	ug/Kg
				Methyl tert butyl ether (MTBE)	4.3 UJ	ug/Kg
				Methylene chloride	4.3 UJ	ug/Kg
				Naphthalene	4.3 UJ	ug/Kg
				Styrene	4.3 UJ	ug/Kg
				Tetrachloroethene	4.3 UJ	ug/Kg
				Toluene	0.45 J	ug/Kg
				trans-1,2-Dichloroethene	4.5 J	ug/Kg
trans-1,3-Dichloropropene	4.3 UJ	ug/Kg				
Trichloroethene	4.3 UJ	ug/Kg				

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	S-170720-RA-10	49 hours- to preservation	48 hours- to preservation	Trichlorofluoromethane (CFC-11)	4.3 UJ	ug/Kg
				Trifluorotrchloroethane (CFC-113)	4.3 UJ	ug/Kg
				Vinyl chloride	12 J	ug/Kg
				Xylenes (total)	0.39 J	ug/Kg
VOC	W-170726-RA-29	12	7	1,2,4-Trichlorobenzene	6.7 UJ	ug/L
				1,2-Dichlorobenzene	6.7 UJ	ug/L
				1,3-Dichlorobenzene	6.7 UJ	ug/L
				1,4-Dichlorobenzene	6.7 UJ	ug/L
				Benzene	9.0 J	ug/L
				Chlorobenzene	6.7 UJ	ug/L
				Ethylbenzene	6.7 UJ	ug/L
				Isopropyl benzene	6.7 UJ	ug/L
				Naphthalene	6.7 UJ	ug/L
				Styrene	6.7 UJ	ug/L
				Toluene	6.7 UJ	ug/L
				Xylenes (total)	13 UJ	ug/L
VOC	W-170726-RA-31	12	7	1,2,4-Trichlorobenzene	500 UJ	ug/L
				1,2-Dichlorobenzene	500 UJ	ug/L
				1,3-Dichlorobenzene	500 UJ	ug/L
				1,4-Dichlorobenzene	500 UJ	ug/L
				Benzene	500 UJ	ug/L
				Chlorobenzene	500 UJ	ug/L
				Ethylbenzene	500 UJ	ug/L
				Isopropyl benzene	500 UJ	ug/L
				Naphthalene	500 UJ	ug/L
				Styrene	500 UJ	ug/L
				Toluene	500 UJ	ug/L
				Xylenes (total)	1000 UJ	ug/L

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	W-170727-RA-34	12	7	1,2,4-Trichlorobenzene	6.3 UJ	ug/L
				1,2-Dichlorobenzene	6.3 UJ	ug/L
				1,3-Dichlorobenzene	6.3 UJ	ug/L
				1,4-Dichlorobenzene	6.3 UJ	ug/L
				Benzene	6.2 J	ug/L
				Chlorobenzene	6.3 UJ	ug/L
				Ethylbenzene	6.3 UJ	ug/L
				Isopropyl benzene	6.3 UJ	ug/L
				Naphthalene	6.3 UJ	ug/L
				Styrene	6.3 UJ	ug/L
				Toluene	6.3 UJ	ug/L
				Xylenes (total)	13 UJ	ug/L
				VOC	W-170727-RA-35	12
1,2-Dichlorobenzene	6.3 UJ	ug/L				
1,3-Dichlorobenzene	6.3 UJ	ug/L				
1,4-Dichlorobenzene	6.3 UJ	ug/L				
Benzene	15 J	ug/L				
Chlorobenzene	6.3 UJ	ug/L				
Ethylbenzene	6.3 UJ	ug/L				
Isopropyl benzene	6.3 UJ	ug/L				
Naphthalene	6.3 UJ	ug/L				
Styrene	6.3 UJ	ug/L				
Toluene	6.3 UJ	ug/L				
Xylenes (total)	13 UJ	ug/L				
VOC	W-170727-RA-36	12	7			
				1,2-Dichlorobenzene	1.0 UJ	ug/L
				1,3-Dichlorobenzene	1.0 UJ	ug/L
				1,4-Dichlorobenzene	1.0 UJ	ug/L
				Benzene	1.5 J	ug/L

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	W-170727-RA-36	12	7	Chlorobenzene	1.0 UJ	ug/L
				Ethylbenzene	1.0 UJ	ug/L
				Isopropyl benzene	1.0 UJ	ug/L
				Naphthalene	1.0 UJ	ug/L
				Styrene	1.0 UJ	ug/L
				Toluene	0.36 J	ug/L
				Xylenes (total)	2.0 UJ	ug/L
VOC	W-170727-RA-37	13	7	1,2,4-Trichlorobenzene	2.5 UJ	ug/L
				1,2-Dichlorobenzene	2.5 UJ	ug/L
				1,3-Dichlorobenzene	2.5 UJ	ug/L
				1,4-Dichlorobenzene	2.5 UJ	ug/L
				Benzene	45.0 J	ug/L
				Chlorobenzene	2.5 UJ	ug/L
				Ethylbenzene	11 J	ug/L
				Isopropyl benzene	2.7 J	ug/L
				Naphthalene	70.0 J	ug/L
				Styrene	2.5 UJ	ug/L
				Toluene	2.5 UJ	ug/L
				Xylenes (total)	17.0 J	ug/L
				VOC	W-170801-RA-44	9
1,2-Dichlorobenzene	1.0 UJ	ug/L				
1,3-Dichlorobenzene	1.0 UJ	ug/L				
1,4-Dichlorobenzene	1.0 UJ	ug/L				
Benzene	1.0 UJ	ug/L				
Chlorobenzene	1.0 UJ	ug/L				
Ethylbenzene	1.0 UJ	ug/L				
Isopropyl benzene	1.0 UJ	ug/L				
Naphthalene	1.0 UJ	ug/L				
Styrene	1.0 UJ	ug/L				

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	W-170801-RA-44	9	7	Toluene	1.0 UJ	ug/L
				Xylenes (total)	2.0 UJ	ug/L
VOC	W-170801-RA-45	9	7	1,2,4-Trichlorobenzene	1.0 UJ	ug/L
				1,2-Dichlorobenzene	1.0 UJ	ug/L
				1,3-Dichlorobenzene	1.0 UJ	ug/L
				1,4-Dichlorobenzene	1.0 UJ	ug/L
				Benzene	1.0 UJ	ug/L
				Chlorobenzene	1.0 UJ	ug/L
				Ethylbenzene	1.0 UJ	ug/L
				Isopropyl benzene	1.0 UJ	ug/L
				Naphthalene	1.0 UJ	ug/L
				Styrene	1.0 UJ	ug/L
				Toluene	0.25 J	ug/L
				Xylenes (total)	2.0 UJ	ug/L
				VOC	W-170801-RA-47	10
1,2-Dichlorobenzene	13 UJ	ug/L				
1,3-Dichlorobenzene	13 UJ	ug/L				
1,4-Dichlorobenzene	13 UJ	ug/L				
Benzene	15 J	ug/L				
Chlorobenzene	13 UJ	ug/L				
Ethylbenzene	13 UJ	ug/L				
Isopropyl benzene	13 UJ	ug/L				
Naphthalene	13 UJ	ug/L				
Styrene	13 UJ	ug/L				
Toluene	13 J	ug/L				
Xylenes (total)	27 UJ	ug/L				

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	W-170801-RA-49	10	7	1,2,4-Trichlorobenzene	50 UJ	ug/L
				1,2-Dichlorobenzene	50 UJ	ug/L
				1,3-Dichlorobenzene	50 UJ	ug/L
				1,4-Dichlorobenzene	50 UJ	ug/L
				Benzene	47 J	ug/L
				Chlorobenzene	50 UJ	ug/L
				Ethylbenzene	50 UJ	ug/L
				Isopropyl benzene	50 UJ	ug/L
				Naphthalene	50 UJ	ug/L
				Styrene	50 UJ	ug/L
				Toluene	50 UJ	ug/L
				Xylenes (total)	100 UJ	ug/L

Notes:

- VOC - Volatile Organic Compounds
 J - Estimated concentration
 UJ - Not detected; associated reporting limit is estimated

Table 5

**Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Analyte	Analysis Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
VOC	Acetone	7/21/2017	12.3 J	S-170717-RA-01 S-170718-RA-02	14 JB 21 JB	16 U 21 U	ug/kg ug/kg
VOC	Acetone	7/24/2017	6.27 J	S-170718-RA-03	8.1 JB	19 U	ug/kg
VOC	2-Butanone (Methyl ethyl ketone) (MEK)	7/21/2017	2.49 J	S-170717-RA-01 S-170718-RA-02	5.1 JB 3.8 JB	16 U 21 U	ug/kg ug/kg
VOC	2-Butanone (Methyl ethyl ketone) (MEK)	7/24/2017	3.52 J	S-170718-RA-03	3.6 JB	19 U	ug/kg
VOC	Methylene chloride	7/25/2017	265	S-170720-RA-04 S-170720-RA-06	400 B 260 B	400 U 260 U	ug/kg ug/kg
VOC	Methylene chloride	7/25/2017	282	S-170720-RA-09 S-170720-RA-11	250 B 200 JB	250 U 230 U	ug/kg ug/kg
VOC	Methylene chloride	7/25/2017	5.05	S-170720-RA-05 S-170720-RA-07 S-170720-RA-08	4.6 JB 2.4 JB 3.1 JB	6.1 U 4.1 U 4.5 U	ug/kg ug/kg ug/kg
VOC	Methylene chloride	8/01/2017	2.25 J	S-170727-RA-13	3.3 JB	4.6 U	ug/kg
VOC	2-Butanone (Methyl ethyl ketone) (MEK)	7/28/2017	2.95 J	S-170720-RA-10	2.7 JB	17 U	ug/kg
VOC	Acetone	7/28/2017	15.5 J	S-170720-RA-10	8.3 JB	17 U	ug/kg

Table 5

**Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Analyte	Analysis Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
VOC	Naphthalene	7/28/2017	0.634 J	S-170720-RA-10	1.2 JB	4.3 U	ug/kg
VOC	Methylene chloride	8/8/2017	1.03	W-170727-RA-34	6.3 B	6.3 U	ug/L
				W-170727-RA-35	6.6 B	6.6 U	ug/L
				W-170727-RA-39	290 B	290 U	ug/L
				W-170727-RA-41	410 B	410 U	ug/L
				W-170727-RA-42	400 B	400 U	ug/L
VOC	Methylene chloride	8/09/2017	3.08 J	S-170802-RA-15	2.9 JB	4.6 U	ug/kg
				S-170802-RA-16	2.4 JB	4.0 U	ug/kg
				S-170802-RA-17	3.1 JB	4.2 U	ug/kg
				S-170804-RA-19	3.7 JB	6.4 U	ug/kg

Notes:

- * - Blank result adjusted for sample factors where applicable
- B - Laboratory qualifier - result detected in associated method blank
- J - Estimated concentration
- U - Not detected at the associated reporting limit

Table 6

**Qualified Sample Data Due to Outlying of Surrogate Recoveries
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Sample ID	Surrogate	Surrogate % Recovery	Control Limits % Recovery	Analyte	Qualified Result	Units
VOC	S-170720-RA-04	p-Bromofluorobenzene	148	58-142	4-Methyl-2-pentanone (Methyl isobutyl ketone)	510 J	ug/kg
					Ethylbenzene	470 J	ug/kg
					Methylene chloride	400 J	ug/kg
					Tetrachloroethene	81 J	ug/kg
					Xylenes (total)	2800 J	ug/kg
VOC	S-170720-RA-11	p-Bromofluorobenzene	158	58-142	cis-1,2-Dichloroethene	2000 J	ug/kg
					Methylene chloride	200 J	ug/kg
					trans-1,2-Dichloroethene	76 J	ug/kg
VOC	S-170726-RA-12	p-Bromofluorobenzene	144	58-142	Methyl acetate	3600 J	ug/kg
					Methylene chloride	180 J	ug/kg
					Naphthalene	97 J	ug/kg
					Tetrachloroethene	920 J	ug/kg

Notes:

VOC - Volatile Organic Compounds

J - Estimated concentration

Table 7

**Qualified Sample Data Due to Analyte Concentrations in the Trip Blanks
Groundwater and Soil Sampling Event
6714 Walker Street
St. Louis Park, Minnesota
July - August 2017**

Parameter	Blank Date (mm/dd/yyyy)	Analyte	Blank Result	Associated Sample ID	Original Result	Qualified Result	Units
VOC	TRIP BLANK 07/21/2017	Acetone	5.4 J	W-170721-RA-19	2.1 J	10 U	ug/L
				W-170721-RA-25	3.9 J	10 U	ug/L
VOC	TRIP BLANK 07/21/2017	Trichloroethene	0.65 J	W-170721-RA-20	4.7 J	5.0 U	ug/L

Note:

- J - Estimated concentration
U - Not detected at the associated reporting limit

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-82505-1

Client Project/Site: 88751, Hinshaw & Culbertson

For:

GHD Services Inc.

1801 Old Highway 8 NW

Suite 114

St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson



Authorized for release by:

7/27/2017 11:35:38 AM

Denise Heckler, Project Manager II

(330)966-9477

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Job ID: 240-82505-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-82505-1

Comments

No additional comments.

Receipt

The samples were received on 7/19/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.7° C.

GC/MS VOA

Method(s) 8260B: The following samples were submitted for volatile analysis with insufficient preservation (pH>2): W-170717-RA-01 (240-82505-2), W-170717-RA-02 (240-82505-3) and W-170717-RA-03 (240-82505-4), W-170717-RA-05 (240-82505-6) and W-170717-RA-06 (240-82505-7), W-170717-RA-04 (240-82505-5).

Method(s) 8260B: The laboratory control sample (LCS) for 288161 recovered outside control limits for the following analyte(s): Trichlorofluoromethane. This analyte has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method(s) 8260B: Surrogate recovery for the following sample was outside the upper control limit: TRIP BLANK (240-82505-10). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-288034 and analytical batch 240-288165.

Method(s) 8260B: The laboratory control sample (LCS) for 288349 recovered outside control limits for multiple analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-82505-1	S-170717-RA-01	Solid	07/17/17 11:00	07/19/17 09:30
240-82505-2	W-170717-RA-01	Water	07/17/17 12:50	07/19/17 09:30
240-82505-3	W-170717-RA-02	Water	07/17/17 13:20	07/19/17 09:30
240-82505-4	W-170717-RA-03	Water	07/17/17 13:50	07/19/17 09:30
240-82505-5	W-170717-RA-04	Water	07/17/17 15:20	07/19/17 09:30
240-82505-6	W-170717-RA-05	Water	07/17/17 15:10	07/19/17 09:30
240-82505-7	W-170717-RA-06	Water	07/17/17 16:10	07/19/17 09:30
240-82505-8	S-170718-RA-02	Solid	07/18/17 14:40	07/19/17 09:30
240-82505-9	S-170718-RA-03	Solid	07/18/17 14:50	07/19/17 09:30
240-82505-10	TRIP BLANK	Water	07/17/17 00:00	07/19/17 09:30



Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: S-170717-RA-01

Lab Sample ID: 240-82505-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	14	J B	16	2.5	ug/Kg	1	☒	8260B	Total/NA
2-Butanone (MEK)	5.1	J B	16	1.0	ug/Kg	1	☒	8260B	Total/NA
Trichloroethene	0.74	J	4.1	0.34	ug/Kg	1	☒	8260B	Total/NA

Client Sample ID: W-170717-RA-01

Lab Sample ID: 240-82505-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	180		5.0	1.5	ug/L	5		8260B	Total/NA
Trichloroethene	2.9	J	5.0	1.7	ug/L	5		8260B	Total/NA

Client Sample ID: W-170717-RA-02

Lab Sample ID: 240-82505-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2400		100	30	ug/L	100		8260B	Total/NA

Client Sample ID: W-170717-RA-03

Lab Sample ID: 240-82505-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	15000		500	150	ug/L	500		8260B	Total/NA

Client Sample ID: W-170717-RA-04

Lab Sample ID: 240-82505-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	16000		1000	300	ug/L	1000		8260B	Total/NA

Client Sample ID: W-170717-RA-05

Lab Sample ID: 240-82505-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	47000		2500	750	ug/L	2500		8260B	Total/NA

Client Sample ID: W-170717-RA-06

Lab Sample ID: 240-82505-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	48000		2500	750	ug/L	2500		8260B	Total/NA

Client Sample ID: S-170718-RA-02

Lab Sample ID: 240-82505-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	21	B	21	3.3	ug/Kg	1	☒	8260B	Total/NA
2-Butanone (MEK)	3.8	J B	21	1.4	ug/Kg	1	☒	8260B	Total/NA
Ethylbenzene	0.33	J	5.3	0.29	ug/Kg	1	☒	8260B	Total/NA
Tetrachloroethene	4.5	J	5.3	0.40	ug/Kg	1	☒	8260B	Total/NA
Toluene	1.2	J	5.3	0.36	ug/Kg	1	☒	8260B	Total/NA
Xylenes, Total	1.5	J	11	0.43	ug/Kg	1	☒	8260B	Total/NA

Client Sample ID: S-170718-RA-03

Lab Sample ID: 240-82505-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	8.1	J B	19	2.9	ug/Kg	1	☒	8260B	Total/NA
2-Butanone (MEK)	3.6	J B	19	1.2	ug/Kg	1	☒	8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: S-170718-RA-03 (Continued)

Lab Sample ID: 240-82505-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.78	J	4.8	0.35	ug/Kg	1	☼	8260B	Total/NA
Toluene	0.74	J	4.8	0.32	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82505-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.65	J	1.0	0.53	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: S-170717-RA-01

Lab Sample ID: 240-82505-1

Date Collected: 07/17/17 11:00

Matrix: Solid

Date Received: 07/19/17 09:30

Percent Solids: 87.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	14	J B	16	2.5	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Benzene	4.1	U	4.1	0.26	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Dichlorobromomethane	4.1	U	4.1	0.27	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Bromoform	4.1	U	4.1	0.33	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Bromomethane	4.1	U	4.1	0.48	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
2-Butanone (MEK)	5.1	J B	16	1.0	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Carbon disulfide	4.1	U	4.1	0.17	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Carbon tetrachloride	4.1	U	4.1	0.21	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Chlorobenzene	4.1	U	4.1	0.27	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Chloroethane	4.1	U	4.1	0.31	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Chloroform	4.1	U	4.1	0.19	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Chloromethane	4.1	U	4.1	0.31	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,1-Dichloroethane	4.1	U	4.1	0.27	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,2-Dichloroethane	4.1	U	4.1	0.24	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,1-Dichloroethene	4.1	U	4.1	0.44	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,2-Dichloropropane	4.1	U	4.1	0.25	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
cis-1,3-Dichloropropene	4.1	U	4.1	0.21	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
trans-1,3-Dichloropropene	4.1	U	4.1	0.17	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Ethylbenzene	4.1	U	4.1	0.22	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
2-Hexanone	16	U	16	0.48	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Methylene Chloride	4.1	U	4.1	0.20	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
4-Methyl-2-pentanone (MIBK)	16	U	16	0.73	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Styrene	4.1	U	4.1	0.22	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,1,2,2-Tetrachloroethane	4.1	U	4.1	0.21	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Tetrachloroethene	4.1	U	4.1	0.30	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Toluene	4.1	U	4.1	0.28	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Trichloroethene	0.74	J	4.1	0.34	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Vinyl chloride	4.1	U	4.1	0.23	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Xylenes, Total	8.2	U	8.2	0.33	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,1,1-Trichloroethane	4.1	U	4.1	0.19	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,1,2-Trichloroethane	4.1	U	4.1	0.32	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Cyclohexane	8.2	U	8.2	0.17	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,2-Dibromo-3-Chloropropane	8.2	U	8.2	0.56	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Ethylene Dibromide	4.1	U	4.1	0.29	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Dichlorodifluoromethane	4.1	U	4.1	0.29	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
cis-1,2-Dichloroethene	4.1	U	4.1	0.23	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
trans-1,2-Dichloroethene	4.1	U	4.1	0.31	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Isopropylbenzene	4.1	U	4.1	0.16	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Methyl acetate	21	U	21	0.96	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Methyl tert-butyl ether	4.1	U	4.1	0.22	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.1	U	4.1	0.40	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,2,4-Trichlorobenzene	4.1	U	4.1	0.20	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,2-Dichlorobenzene	4.1	U	4.1	0.18	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,3-Dichlorobenzene	4.1	U	4.1	0.24	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
1,4-Dichlorobenzene	4.1	U	4.1	0.29	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Trichlorofluoromethane	4.1	U	4.1	0.20	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Chlorodibromomethane	4.1	U	4.1	0.25	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Methylcyclohexane	8.2	U	8.2	0.19	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1
Naphthalene	4.1	U	4.1	0.27	ug/Kg	☼	07/19/17 10:20	07/21/17 16:16	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: S-170717-RA-01

Lab Sample ID: 240-82505-1

Date Collected: 07/17/17 11:00

Matrix: Solid

Date Received: 07/19/17 09:30

Percent Solids: 87.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		61 - 127	07/19/17 10:20	07/21/17 16:16	1
4-Bromofluorobenzene (Surr)	80		61 - 132	07/19/17 10:20	07/21/17 16:16	1
Toluene-d8 (Surr)	90		66 - 125	07/19/17 10:20	07/21/17 16:16	1
Dibromofluoromethane (Surr)	89		43 - 131	07/19/17 10:20	07/21/17 16:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.8		0.1	0.1	%			07/19/17 14:51	1
Percent Moisture	12.2		0.1	0.1	%			07/19/17 14:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-01

Lab Sample ID: 240-82505-2

Date Collected: 07/17/17 12:50

Matrix: Water

Date Received: 07/19/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	50	U	50	8.8	ug/L			07/21/17 18:47	5
Benzene	5.0	U	5.0	1.4	ug/L			07/21/17 18:47	5
Dichlorobromomethane	5.0	U	5.0	1.5	ug/L			07/21/17 18:47	5
Bromoform	5.0	U	5.0	2.2	ug/L			07/21/17 18:47	5
Bromomethane	5.0	U	5.0	2.1	ug/L			07/21/17 18:47	5
2-Butanone (MEK)	50	U	50	5.1	ug/L			07/21/17 18:47	5
Carbon disulfide	5.0	U	5.0	1.7	ug/L			07/21/17 18:47	5
Carbon tetrachloride	5.0	U	5.0	1.8	ug/L			07/21/17 18:47	5
Chlorobenzene	5.0	U	5.0	1.6	ug/L			07/21/17 18:47	5
Chloroethane	5.0	U	5.0	2.1	ug/L			07/21/17 18:47	5
Chloroform	5.0	U	5.0	1.6	ug/L			07/21/17 18:47	5
Chloromethane	5.0	U	5.0	2.2	ug/L			07/21/17 18:47	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			07/21/17 18:47	5
1,2-Dichloroethane	5.0	U	5.0	1.5	ug/L			07/21/17 18:47	5
1,1-Dichloroethene	5.0	U	5.0	1.4	ug/L			07/21/17 18:47	5
1,2-Dichloropropane	5.0	U	5.0	1.5	ug/L			07/21/17 18:47	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.3	ug/L			07/21/17 18:47	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.6	ug/L			07/21/17 18:47	5
Ethylbenzene	5.0	U	5.0	1.3	ug/L			07/21/17 18:47	5
2-Hexanone	50	U	50	6.2	ug/L			07/21/17 18:47	5
Methylene Chloride	5.0	U	5.0	2.7	ug/L			07/21/17 18:47	5
4-Methyl-2-pentanone (MIBK)	50	U	50	3.6	ug/L			07/21/17 18:47	5
Styrene	5.0	U	5.0	1.2	ug/L			07/21/17 18:47	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.6	ug/L			07/21/17 18:47	5
Tetrachloroethene	180		5.0	1.5	ug/L			07/21/17 18:47	5
Toluene	5.0	U	5.0	1.2	ug/L			07/21/17 18:47	5
Trichloroethene	2.9	J	5.0	1.7	ug/L			07/21/17 18:47	5
Vinyl chloride	5.0	U	5.0	2.3	ug/L			07/21/17 18:47	5
Xylenes, Total	10	U	10	1.2	ug/L			07/21/17 18:47	5
1,1,1-Trichloroethane	5.0	U	5.0	1.2	ug/L			07/21/17 18:47	5
1,1,2-Trichloroethane	5.0	U	5.0	1.7	ug/L			07/21/17 18:47	5
Cyclohexane	5.0	U	5.0	2.2	ug/L			07/21/17 18:47	5
1,2-Dibromo-3-Chloropropane	10	U	10	2.4	ug/L			07/21/17 18:47	5
Ethylene Dibromide	5.0	U	5.0	1.2	ug/L			07/21/17 18:47	5
Dichlorodifluoromethane	5.0	U	5.0	2.5	ug/L			07/21/17 18:47	5
cis-1,2-Dichloroethene	5.0	U	5.0	1.5	ug/L			07/21/17 18:47	5
trans-1,2-Dichloroethene	5.0	U	5.0	1.5	ug/L			07/21/17 18:47	5
Isopropylbenzene	5.0	U	5.0	1.1	ug/L			07/21/17 18:47	5
Methyl acetate	50	U	50	7.2	ug/L			07/21/17 18:47	5
Methyl tert-butyl ether	5.0	U	5.0	1.4	ug/L			07/21/17 18:47	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	2.1	ug/L			07/21/17 18:47	5
1,2,4-Trichlorobenzene	5.0	U	5.0	1.4	ug/L			07/21/17 18:47	5
1,2-Dichlorobenzene	5.0	U	5.0	1.3	ug/L			07/21/17 18:47	5
1,3-Dichlorobenzene	5.0	U	5.0	1.6	ug/L			07/21/17 18:47	5
1,4-Dichlorobenzene	5.0	U	5.0	1.2	ug/L			07/21/17 18:47	5
Trichlorofluoromethane	5.0	U	5.0	2.5	ug/L			07/21/17 18:47	5
Chlorodibromomethane	5.0	U	5.0	1.3	ug/L			07/21/17 18:47	5
Methylcyclohexane	5.0	U	5.0	2.3	ug/L			07/21/17 18:47	5
Naphthalene	5.0	U	5.0	1.3	ug/L			07/21/17 18:47	5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-01

Date Collected: 07/17/17 12:50

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-2

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	115		61 - 138		07/21/17 18:47	5
4-Bromofluorobenzene (Surr)	87		69 - 120		07/21/17 18:47	5
Toluene-d8 (Surr)	116		73 - 120		07/21/17 18:47	5
Dibromofluoromethane (Surr)	110		69 - 124		07/21/17 18:47	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-02

Lab Sample ID: 240-82505-3

Date Collected: 07/17/17 13:20

Matrix: Water

Date Received: 07/19/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1000	U	1000	180	ug/L			07/21/17 19:09	100
Benzene	100	U	100	28	ug/L			07/21/17 19:09	100
Dichlorobromomethane	100	U	100	30	ug/L			07/21/17 19:09	100
Bromoform	100	U	100	43	ug/L			07/21/17 19:09	100
Bromomethane	100	U	100	42	ug/L			07/21/17 19:09	100
2-Butanone (MEK)	1000	U	1000	100	ug/L			07/21/17 19:09	100
Carbon disulfide	100	U	100	34	ug/L			07/21/17 19:09	100
Carbon tetrachloride	100	U	100	35	ug/L			07/21/17 19:09	100
Chlorobenzene	100	U	100	32	ug/L			07/21/17 19:09	100
Chloroethane	100	U	100	41	ug/L			07/21/17 19:09	100
Chloroform	100	U	100	31	ug/L			07/21/17 19:09	100
Chloromethane	100	U	100	43	ug/L			07/21/17 19:09	100
1,1-Dichloroethane	100	U	100	25	ug/L			07/21/17 19:09	100
1,2-Dichloroethane	100	U	100	30	ug/L			07/21/17 19:09	100
1,1-Dichloroethene	100	U	100	27	ug/L			07/21/17 19:09	100
1,2-Dichloropropane	100	U	100	30	ug/L			07/21/17 19:09	100
cis-1,3-Dichloropropene	100	U	100	26	ug/L			07/21/17 19:09	100
trans-1,3-Dichloropropene	100	U	100	31	ug/L			07/21/17 19:09	100
Ethylbenzene	100	U	100	26	ug/L			07/21/17 19:09	100
2-Hexanone	1000	U	1000	120	ug/L			07/21/17 19:09	100
Methylene Chloride	100	U	100	53	ug/L			07/21/17 19:09	100
4-Methyl-2-pentanone (MIBK)	1000	U	1000	71	ug/L			07/21/17 19:09	100
Styrene	100	U	100	23	ug/L			07/21/17 19:09	100
1,1,2,2-Tetrachloroethane	100	U	100	32	ug/L			07/21/17 19:09	100
Tetrachloroethene	2400		100	30	ug/L			07/21/17 19:09	100
Toluene	100	U	100	23	ug/L			07/21/17 19:09	100
Trichloroethene	100	U	100	33	ug/L			07/21/17 19:09	100
Vinyl chloride	100	U	100	45	ug/L			07/21/17 19:09	100
Xylenes, Total	200	U	200	24	ug/L			07/21/17 19:09	100
1,1,1-Trichloroethane	100	U	100	23	ug/L			07/21/17 19:09	100
1,1,2-Trichloroethane	100	U	100	34	ug/L			07/21/17 19:09	100
Cyclohexane	100	U	100	44	ug/L			07/21/17 19:09	100
1,2-Dibromo-3-Chloropropane	200	U	200	47	ug/L			07/21/17 19:09	100
Ethylene Dibromide	100	U	100	23	ug/L			07/21/17 19:09	100
Dichlorodifluoromethane	100	U	100	50	ug/L			07/21/17 19:09	100
cis-1,2-Dichloroethene	100	U	100	30	ug/L			07/21/17 19:09	100
trans-1,2-Dichloroethene	100	U	100	29	ug/L			07/21/17 19:09	100
Isopropylbenzene	100	U	100	21	ug/L			07/21/17 19:09	100
Methyl acetate	1000	U	1000	140	ug/L			07/21/17 19:09	100
Methyl tert-butyl ether	100	U	100	27	ug/L			07/21/17 19:09	100
1,1,2-Trichloro-1,2,2-trifluoroethane	100	U	100	41	ug/L			07/21/17 19:09	100
1,2,4-Trichlorobenzene	100	U	100	27	ug/L			07/21/17 19:09	100
1,2-Dichlorobenzene	100	U	100	26	ug/L			07/21/17 19:09	100
1,3-Dichlorobenzene	100	U	100	32	ug/L			07/21/17 19:09	100
1,4-Dichlorobenzene	100	U	100	23	ug/L			07/21/17 19:09	100
Trichlorofluoromethane	100	U	100	50	ug/L			07/21/17 19:09	100
Chlorodibromomethane	100	U	100	25	ug/L			07/21/17 19:09	100
Methylcyclohexane	100	U	100	45	ug/L			07/21/17 19:09	100
Naphthalene	100	U	100	25	ug/L			07/21/17 19:09	100

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-02

Date Collected: 07/17/17 13:20

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-3

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	111		61 - 138		07/21/17 19:09	100
4-Bromofluorobenzene (Surr)	83		69 - 120		07/21/17 19:09	100
Toluene-d8 (Surr)	111		73 - 120		07/21/17 19:09	100
Dibromofluoromethane (Surr)	106		69 - 124		07/21/17 19:09	100

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-03

Lab Sample ID: 240-82505-4

Date Collected: 07/17/17 13:50

Matrix: Water

Date Received: 07/19/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5000	U	5000	880	ug/L			07/21/17 19:32	500
Benzene	500	U	500	140	ug/L			07/21/17 19:32	500
Dichlorobromomethane	500	U	500	150	ug/L			07/21/17 19:32	500
Bromoform	500	U	500	220	ug/L			07/21/17 19:32	500
Bromomethane	500	U	500	210	ug/L			07/21/17 19:32	500
2-Butanone (MEK)	5000	U	5000	510	ug/L			07/21/17 19:32	500
Carbon disulfide	500	U	500	170	ug/L			07/21/17 19:32	500
Carbon tetrachloride	500	U	500	180	ug/L			07/21/17 19:32	500
Chlorobenzene	500	U	500	160	ug/L			07/21/17 19:32	500
Chloroethane	500	U F1	500	210	ug/L			07/21/17 19:32	500
Chloroform	500	U	500	160	ug/L			07/21/17 19:32	500
Chloromethane	500	U	500	220	ug/L			07/21/17 19:32	500
1,1-Dichloroethane	500	U	500	130	ug/L			07/21/17 19:32	500
1,2-Dichloroethane	500	U	500	150	ug/L			07/21/17 19:32	500
1,1-Dichloroethene	500	U	500	140	ug/L			07/21/17 19:32	500
1,2-Dichloropropane	500	U	500	150	ug/L			07/21/17 19:32	500
cis-1,3-Dichloropropene	500	U	500	130	ug/L			07/21/17 19:32	500
trans-1,3-Dichloropropene	500	U	500	160	ug/L			07/21/17 19:32	500
Ethylbenzene	500	U	500	130	ug/L			07/21/17 19:32	500
2-Hexanone	5000	U	5000	620	ug/L			07/21/17 19:32	500
Methylene Chloride	500	U	500	270	ug/L			07/21/17 19:32	500
4-Methyl-2-pentanone (MIBK)	5000	U	5000	360	ug/L			07/21/17 19:32	500
Styrene	500	U	500	120	ug/L			07/21/17 19:32	500
1,1,2,2-Tetrachloroethane	500	U F1	500	160	ug/L			07/21/17 19:32	500
Tetrachloroethene	15000		500	150	ug/L			07/21/17 19:32	500
Toluene	500	U	500	120	ug/L			07/21/17 19:32	500
Trichloroethene	500	U	500	170	ug/L			07/21/17 19:32	500
Vinyl chloride	500	U	500	230	ug/L			07/21/17 19:32	500
Xylenes, Total	1000	U	1000	120	ug/L			07/21/17 19:32	500
1,1,1-Trichloroethane	500	U	500	120	ug/L			07/21/17 19:32	500
1,1,2-Trichloroethane	500	U	500	170	ug/L			07/21/17 19:32	500
Cyclohexane	500	U	500	220	ug/L			07/21/17 19:32	500
1,2-Dibromo-3-Chloropropane	1000	U	1000	240	ug/L			07/21/17 19:32	500
Ethylene Dibromide	500	U	500	120	ug/L			07/21/17 19:32	500
Dichlorodifluoromethane	500	U F2	500	250	ug/L			07/21/17 19:32	500
cis-1,2-Dichloroethene	500	U	500	150	ug/L			07/21/17 19:32	500
trans-1,2-Dichloroethene	500	U	500	150	ug/L			07/21/17 19:32	500
Isopropylbenzene	500	U	500	110	ug/L			07/21/17 19:32	500
Methyl acetate	5000	U	5000	720	ug/L			07/21/17 19:32	500
Methyl tert-butyl ether	500	U	500	140	ug/L			07/21/17 19:32	500
1,1,2-Trichloro-1,2,2-trifluoroethane	500	U	500	210	ug/L			07/21/17 19:32	500
1,2,4-Trichlorobenzene	500	U	500	140	ug/L			07/21/17 19:32	500
1,2-Dichlorobenzene	500	U	500	130	ug/L			07/21/17 19:32	500
1,3-Dichlorobenzene	500	U	500	160	ug/L			07/21/17 19:32	500
1,4-Dichlorobenzene	500	U	500	120	ug/L			07/21/17 19:32	500
Trichlorofluoromethane	500	U	500	250	ug/L			07/21/17 19:32	500
Chlorodibromomethane	500	U	500	130	ug/L			07/21/17 19:32	500
Methylcyclohexane	500	U F2	500	230	ug/L			07/21/17 19:32	500
Naphthalene	500	U	500	130	ug/L			07/21/17 19:32	500

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-03

Date Collected: 07/17/17 13:50

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-4

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	112		61 - 138		07/21/17 19:32	500
4-Bromofluorobenzene (Surr)	85		69 - 120		07/21/17 19:32	500
Toluene-d8 (Surr)	114		73 - 120		07/21/17 19:32	500
Dibromofluoromethane (Surr)	107		69 - 124		07/21/17 19:32	500

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-04

Lab Sample ID: 240-82505-5

Date Collected: 07/17/17 15:20

Matrix: Water

Date Received: 07/19/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10000	U	10000	1800	ug/L			07/24/17 10:13	1000
Benzene	1000	U	1000	280	ug/L			07/24/17 10:13	1000
Dichlorobromomethane	1000	U	1000	300	ug/L			07/24/17 10:13	1000
Bromoform	1000	U	1000	430	ug/L			07/24/17 10:13	1000
Bromomethane	1000	U	1000	420	ug/L			07/24/17 10:13	1000
2-Butanone (MEK)	10000	U	10000	1000	ug/L			07/24/17 10:13	1000
Carbon disulfide	1000	U	1000	340	ug/L			07/24/17 10:13	1000
Carbon tetrachloride	1000	U	1000	350	ug/L			07/24/17 10:13	1000
Chlorobenzene	1000	U	1000	320	ug/L			07/24/17 10:13	1000
Chloroethane	1000	U	1000	410	ug/L			07/24/17 10:13	1000
Chloroform	1000	U	1000	310	ug/L			07/24/17 10:13	1000
Chloromethane	1000	U	1000	430	ug/L			07/24/17 10:13	1000
1,1-Dichloroethane	1000	U	1000	250	ug/L			07/24/17 10:13	1000
1,2-Dichloroethane	1000	U	1000	300	ug/L			07/24/17 10:13	1000
1,1-Dichloroethene	1000	U	1000	270	ug/L			07/24/17 10:13	1000
1,2-Dichloropropane	1000	U	1000	300	ug/L			07/24/17 10:13	1000
cis-1,3-Dichloropropene	1000	U	1000	260	ug/L			07/24/17 10:13	1000
trans-1,3-Dichloropropene	1000	U	1000	310	ug/L			07/24/17 10:13	1000
Ethylbenzene	1000	U	1000	260	ug/L			07/24/17 10:13	1000
2-Hexanone	10000	U	10000	1200	ug/L			07/24/17 10:13	1000
Methylene Chloride	1000	U	1000	530	ug/L			07/24/17 10:13	1000
4-Methyl-2-pentanone (MIBK)	10000	U	10000	710	ug/L			07/24/17 10:13	1000
Styrene	1000	U	1000	230	ug/L			07/24/17 10:13	1000
1,1,2,2-Tetrachloroethane	1000	U *	1000	320	ug/L			07/24/17 10:13	1000
Tetrachloroethene	16000		1000	300	ug/L			07/24/17 10:13	1000
Toluene	1000	U	1000	230	ug/L			07/24/17 10:13	1000
Trichloroethene	1000	U	1000	330	ug/L			07/24/17 10:13	1000
Vinyl chloride	1000	U	1000	450	ug/L			07/24/17 10:13	1000
Xylenes, Total	2000	U	2000	240	ug/L			07/24/17 10:13	1000
1,1,1-Trichloroethane	1000	U	1000	230	ug/L			07/24/17 10:13	1000
1,1,2-Trichloroethane	1000	U *	1000	340	ug/L			07/24/17 10:13	1000
Cyclohexane	1000	U	1000	440	ug/L			07/24/17 10:13	1000
1,2-Dibromo-3-Chloropropane	2000	U	2000	470	ug/L			07/24/17 10:13	1000
Ethylene Dibromide	1000	U	1000	230	ug/L			07/24/17 10:13	1000
Dichlorodifluoromethane	1000	U	1000	500	ug/L			07/24/17 10:13	1000
cis-1,2-Dichloroethene	1000	U	1000	300	ug/L			07/24/17 10:13	1000
trans-1,2-Dichloroethene	1000	U	1000	290	ug/L			07/24/17 10:13	1000
Isopropylbenzene	1000	U	1000	210	ug/L			07/24/17 10:13	1000
Methyl acetate	10000	U	10000	1400	ug/L			07/24/17 10:13	1000
Methyl tert-butyl ether	1000	U	1000	270	ug/L			07/24/17 10:13	1000
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	U	1000	410	ug/L			07/24/17 10:13	1000
1,2,4-Trichlorobenzene	1000	U	1000	270	ug/L			07/24/17 10:13	1000
1,2-Dichlorobenzene	1000	U	1000	260	ug/L			07/24/17 10:13	1000
1,3-Dichlorobenzene	1000	U	1000	320	ug/L			07/24/17 10:13	1000
1,4-Dichlorobenzene	1000	U	1000	230	ug/L			07/24/17 10:13	1000
Trichlorofluoromethane	1000	U	1000	500	ug/L			07/24/17 10:13	1000
Chlorodibromomethane	1000	U	1000	250	ug/L			07/24/17 10:13	1000
Methylcyclohexane	1000	U	1000	450	ug/L			07/24/17 10:13	1000
Naphthalene	1000	U	1000	250	ug/L			07/24/17 10:13	1000

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-04

Date Collected: 07/17/17 15:20

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-5

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	115		61 - 138		07/24/17 10:13	1000
4-Bromofluorobenzene (Surr)	82		69 - 120		07/24/17 10:13	1000
Toluene-d8 (Surr)	110		73 - 120		07/24/17 10:13	1000
Dibromofluoromethane (Surr)	107		69 - 124		07/24/17 10:13	1000

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-05

Lab Sample ID: 240-82505-6

Date Collected: 07/17/17 15:10

Matrix: Water

Date Received: 07/19/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25000	U	25000	4400	ug/L			07/21/17 19:50	2500
Benzene	2500	U	2500	700	ug/L			07/21/17 19:50	2500
Dichlorobromomethane	2500	U	2500	750	ug/L			07/21/17 19:50	2500
Bromoform	2500	U	2500	1100	ug/L			07/21/17 19:50	2500
Bromomethane	2500	U	2500	1100	ug/L			07/21/17 19:50	2500
2-Butanone (MEK)	25000	U	25000	2600	ug/L			07/21/17 19:50	2500
Carbon disulfide	2500	U	2500	850	ug/L			07/21/17 19:50	2500
Carbon tetrachloride	2500	U	2500	880	ug/L			07/21/17 19:50	2500
Chlorobenzene	2500	U	2500	800	ug/L			07/21/17 19:50	2500
Chloroethane	2500	U	2500	1000	ug/L			07/21/17 19:50	2500
Chloroform	2500	U	2500	780	ug/L			07/21/17 19:50	2500
Chloromethane	2500	U	2500	1100	ug/L			07/21/17 19:50	2500
1,1-Dichloroethane	2500	U	2500	630	ug/L			07/21/17 19:50	2500
1,2-Dichloroethane	2500	U	2500	750	ug/L			07/21/17 19:50	2500
1,1-Dichloroethene	2500	U	2500	680	ug/L			07/21/17 19:50	2500
1,2-Dichloropropane	2500	U	2500	750	ug/L			07/21/17 19:50	2500
cis-1,3-Dichloropropene	2500	U	2500	650	ug/L			07/21/17 19:50	2500
trans-1,3-Dichloropropene	2500	U	2500	780	ug/L			07/21/17 19:50	2500
Ethylbenzene	2500	U	2500	650	ug/L			07/21/17 19:50	2500
2-Hexanone	25000	U	25000	3100	ug/L			07/21/17 19:50	2500
Methylene Chloride	2500	U	2500	1300	ug/L			07/21/17 19:50	2500
4-Methyl-2-pentanone (MIBK)	25000	U	25000	1800	ug/L			07/21/17 19:50	2500
Styrene	2500	U	2500	580	ug/L			07/21/17 19:50	2500
1,1,2,2-Tetrachloroethane	2500	U	2500	800	ug/L			07/21/17 19:50	2500
Tetrachloroethene	47000		2500	750	ug/L			07/21/17 19:50	2500
Toluene	2500	U	2500	580	ug/L			07/21/17 19:50	2500
Trichloroethene	2500	U	2500	830	ug/L			07/21/17 19:50	2500
Vinyl chloride	2500	U	2500	1100	ug/L			07/21/17 19:50	2500
Xylenes, Total	5000	U	5000	600	ug/L			07/21/17 19:50	2500
1,1,1-Trichloroethane	2500	U	2500	580	ug/L			07/21/17 19:50	2500
1,1,2-Trichloroethane	2500	U	2500	850	ug/L			07/21/17 19:50	2500
Cyclohexane	2500	U	2500	1100	ug/L			07/21/17 19:50	2500
1,2-Dibromo-3-Chloropropane	5000	U	5000	1200	ug/L			07/21/17 19:50	2500
Ethylene Dibromide	2500	U	2500	580	ug/L			07/21/17 19:50	2500
Dichlorodifluoromethane	2500	U	2500	1300	ug/L			07/21/17 19:50	2500
cis-1,2-Dichloroethene	2500	U	2500	750	ug/L			07/21/17 19:50	2500
trans-1,2-Dichloroethene	2500	U	2500	730	ug/L			07/21/17 19:50	2500
Isopropylbenzene	2500	U	2500	530	ug/L			07/21/17 19:50	2500
Methyl acetate	25000	U	25000	3600	ug/L			07/21/17 19:50	2500
Methyl tert-butyl ether	2500	U	2500	680	ug/L			07/21/17 19:50	2500
1,1,2-Trichloro-1,2,2-trifluoroethane	2500	U	2500	1000	ug/L			07/21/17 19:50	2500
1,2,4-Trichlorobenzene	2500	U	2500	680	ug/L			07/21/17 19:50	2500
1,2-Dichlorobenzene	2500	U	2500	650	ug/L			07/21/17 19:50	2500
1,3-Dichlorobenzene	2500	U	2500	800	ug/L			07/21/17 19:50	2500
1,4-Dichlorobenzene	2500	U	2500	580	ug/L			07/21/17 19:50	2500
Trichlorofluoromethane	2500	U *	2500	1300	ug/L			07/21/17 19:50	2500
Chlorodibromomethane	2500	U	2500	630	ug/L			07/21/17 19:50	2500
Methylcyclohexane	2500	U	2500	1100	ug/L			07/21/17 19:50	2500
Naphthalene	2500	U	2500	630	ug/L			07/21/17 19:50	2500

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-05

Date Collected: 07/17/17 15:10

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-6

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	134		61 - 138		07/21/17 19:50	2500
4-Bromofluorobenzene (Surr)	79		69 - 120		07/21/17 19:50	2500
Toluene-d8 (Surr)	95		73 - 120		07/21/17 19:50	2500
Dibromofluoromethane (Surr)	112		69 - 124		07/21/17 19:50	2500

- 1
- 2
- 3
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- 13

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-06

Lab Sample ID: 240-82505-7

Date Collected: 07/17/17 16:10

Matrix: Water

Date Received: 07/19/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25000	U	25000	4400	ug/L			07/21/17 20:12	2500
Benzene	2500	U	2500	700	ug/L			07/21/17 20:12	2500
Dichlorobromomethane	2500	U	2500	750	ug/L			07/21/17 20:12	2500
Bromoform	2500	U	2500	1100	ug/L			07/21/17 20:12	2500
Bromomethane	2500	U	2500	1100	ug/L			07/21/17 20:12	2500
2-Butanone (MEK)	25000	U	25000	2600	ug/L			07/21/17 20:12	2500
Carbon disulfide	2500	U	2500	850	ug/L			07/21/17 20:12	2500
Carbon tetrachloride	2500	U	2500	880	ug/L			07/21/17 20:12	2500
Chlorobenzene	2500	U	2500	800	ug/L			07/21/17 20:12	2500
Chloroethane	2500	U	2500	1000	ug/L			07/21/17 20:12	2500
Chloroform	2500	U	2500	780	ug/L			07/21/17 20:12	2500
Chloromethane	2500	U	2500	1100	ug/L			07/21/17 20:12	2500
1,1-Dichloroethane	2500	U	2500	630	ug/L			07/21/17 20:12	2500
1,2-Dichloroethane	2500	U	2500	750	ug/L			07/21/17 20:12	2500
1,1-Dichloroethene	2500	U	2500	680	ug/L			07/21/17 20:12	2500
1,2-Dichloropropane	2500	U	2500	750	ug/L			07/21/17 20:12	2500
cis-1,3-Dichloropropene	2500	U	2500	650	ug/L			07/21/17 20:12	2500
trans-1,3-Dichloropropene	2500	U	2500	780	ug/L			07/21/17 20:12	2500
Ethylbenzene	2500	U	2500	650	ug/L			07/21/17 20:12	2500
2-Hexanone	25000	U	25000	3100	ug/L			07/21/17 20:12	2500
Methylene Chloride	2500	U	2500	1300	ug/L			07/21/17 20:12	2500
4-Methyl-2-pentanone (MIBK)	25000	U	25000	1800	ug/L			07/21/17 20:12	2500
Styrene	2500	U	2500	580	ug/L			07/21/17 20:12	2500
1,1,2,2-Tetrachloroethane	2500	U	2500	800	ug/L			07/21/17 20:12	2500
Tetrachloroethene	48000		2500	750	ug/L			07/21/17 20:12	2500
Toluene	2500	U	2500	580	ug/L			07/21/17 20:12	2500
Trichloroethene	2500	U	2500	830	ug/L			07/21/17 20:12	2500
Vinyl chloride	2500	U	2500	1100	ug/L			07/21/17 20:12	2500
Xylenes, Total	5000	U	5000	600	ug/L			07/21/17 20:12	2500
1,1,1-Trichloroethane	2500	U	2500	580	ug/L			07/21/17 20:12	2500
1,1,2-Trichloroethane	2500	U	2500	850	ug/L			07/21/17 20:12	2500
Cyclohexane	2500	U	2500	1100	ug/L			07/21/17 20:12	2500
1,2-Dibromo-3-Chloropropane	5000	U	5000	1200	ug/L			07/21/17 20:12	2500
Ethylene Dibromide	2500	U	2500	580	ug/L			07/21/17 20:12	2500
Dichlorodifluoromethane	2500	U	2500	1300	ug/L			07/21/17 20:12	2500
cis-1,2-Dichloroethene	2500	U	2500	750	ug/L			07/21/17 20:12	2500
trans-1,2-Dichloroethene	2500	U	2500	730	ug/L			07/21/17 20:12	2500
Isopropylbenzene	2500	U	2500	530	ug/L			07/21/17 20:12	2500
Methyl acetate	25000	U	25000	3600	ug/L			07/21/17 20:12	2500
Methyl tert-butyl ether	2500	U	2500	680	ug/L			07/21/17 20:12	2500
1,1,2-Trichloro-1,2,2-trifluoroethane	2500	U	2500	1000	ug/L			07/21/17 20:12	2500
1,2,4-Trichlorobenzene	2500	U	2500	680	ug/L			07/21/17 20:12	2500
1,2-Dichlorobenzene	2500	U	2500	650	ug/L			07/21/17 20:12	2500
1,3-Dichlorobenzene	2500	U	2500	800	ug/L			07/21/17 20:12	2500
1,4-Dichlorobenzene	2500	U	2500	580	ug/L			07/21/17 20:12	2500
Trichlorofluoromethane	2500	U *	2500	1300	ug/L			07/21/17 20:12	2500
Chlorodibromomethane	2500	U	2500	630	ug/L			07/21/17 20:12	2500
Methylcyclohexane	2500	U	2500	1100	ug/L			07/21/17 20:12	2500
Naphthalene	2500	U	2500	630	ug/L			07/21/17 20:12	2500

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-06

Date Collected: 07/17/17 16:10

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-7

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	125		61 - 138		07/21/17 20:12	2500
4-Bromofluorobenzene (Surr)	81		69 - 120		07/21/17 20:12	2500
Toluene-d8 (Surr)	96		73 - 120		07/21/17 20:12	2500
Dibromofluoromethane (Surr)	117		69 - 124		07/21/17 20:12	2500

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: S-170718-RA-02

Lab Sample ID: 240-82505-8

Date Collected: 07/18/17 14:40

Matrix: Solid

Date Received: 07/19/17 09:30

Percent Solids: 94.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	21	B	21	3.3	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Benzene	5.3	U	5.3	0.34	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Dichlorobromomethane	5.3	U	5.3	0.35	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Bromoform	5.3	U	5.3	0.43	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Bromomethane	5.3	U	5.3	0.63	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
2-Butanone (MEK)	3.8	J B	21	1.4	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Carbon disulfide	5.3	U	5.3	0.22	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Carbon tetrachloride	5.3	U	5.3	0.27	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Chlorobenzene	5.3	U	5.3	0.35	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Chloroethane	5.3	U	5.3	0.41	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Chloroform	5.3	U	5.3	0.25	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Chloromethane	5.3	U	5.3	0.41	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,1-Dichloroethane	5.3	U	5.3	0.35	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,2-Dichloroethane	5.3	U	5.3	0.31	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,1-Dichloroethene	5.3	U	5.3	0.58	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,2-Dichloropropane	5.3	U	5.3	0.33	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
cis-1,3-Dichloropropene	5.3	U	5.3	0.28	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
trans-1,3-Dichloropropene	5.3	U	5.3	0.22	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Ethylbenzene	0.33	J	5.3	0.29	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
2-Hexanone	21	U	21	0.62	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Methylene Chloride	5.3	U	5.3	0.26	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
4-Methyl-2-pentanone (MIBK)	21	U	21	0.95	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Styrene	5.3	U	5.3	0.29	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,1,2,2-Tetrachloroethane	5.3	U	5.3	0.28	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Tetrachloroethene	4.5	J	5.3	0.40	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Toluene	1.2	J	5.3	0.36	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Trichloroethene	5.3	U	5.3	0.44	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Vinyl chloride	5.3	U	5.3	0.30	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Xylenes, Total	1.5	J	11	0.43	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,1,1-Trichloroethane	5.3	U	5.3	0.25	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,1,2-Trichloroethane	5.3	U	5.3	0.42	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Cyclohexane	11	U	11	0.22	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,2-Dibromo-3-Chloropropane	11	U	11	0.73	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Ethylene Dibromide	5.3	U	5.3	0.37	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Dichlorodifluoromethane	5.3	U	5.3	0.37	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
cis-1,2-Dichloroethene	5.3	U	5.3	0.30	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
trans-1,2-Dichloroethene	5.3	U	5.3	0.41	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Isopropylbenzene	5.3	U	5.3	0.21	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Methyl acetate	27	U	27	1.3	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Methyl tert-butyl ether	5.3	U	5.3	0.29	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.3	U	5.3	0.52	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,2,4-Trichlorobenzene	5.3	U	5.3	0.26	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,2-Dichlorobenzene	5.3	U	5.3	0.24	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,3-Dichlorobenzene	5.3	U	5.3	0.31	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
1,4-Dichlorobenzene	5.3	U	5.3	0.37	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Trichlorofluoromethane	5.3	U	5.3	0.26	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Chlorodibromomethane	5.3	U	5.3	0.32	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Methylcyclohexane	11	U	11	0.25	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1
Naphthalene	5.3	U	5.3	0.35	ug/Kg	☼	07/19/17 10:20	07/21/17 16:41	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: S-170718-RA-02

Lab Sample ID: 240-82505-8

Date Collected: 07/18/17 14:40

Matrix: Solid

Date Received: 07/19/17 09:30

Percent Solids: 94.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83		61 - 127	07/19/17 10:20	07/21/17 16:41	1
4-Bromofluorobenzene (Surr)	84		61 - 132	07/19/17 10:20	07/21/17 16:41	1
Toluene-d8 (Surr)	92		66 - 125	07/19/17 10:20	07/21/17 16:41	1
Dibromofluoromethane (Surr)	88		43 - 131	07/19/17 10:20	07/21/17 16:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	94.9		0.1	0.1	%			07/19/17 14:51	1
Percent Moisture	5.1		0.1	0.1	%			07/19/17 14:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: S-170718-RA-03

Lab Sample ID: 240-82505-9

Date Collected: 07/18/17 14:50

Matrix: Solid

Date Received: 07/19/17 09:30

Percent Solids: 96.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	8.1	J B	19	2.9	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Benzene	4.8	U	4.8	0.31	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Dichlorobromomethane	4.8	U	4.8	0.32	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Bromoform	4.8	U	4.8	0.38	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Bromomethane	4.8	U	4.8	0.56	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
2-Butanone (MEK)	3.6	J B	19	1.2	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Carbon disulfide	4.8	U	4.8	0.20	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Carbon tetrachloride	4.8	U	4.8	0.24	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Chlorobenzene	4.8	U	4.8	0.32	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Chloroethane	4.8	U	4.8	0.36	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Chloroform	4.8	U	4.8	0.22	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Chloromethane	4.8	U	4.8	0.36	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,1-Dichloroethane	4.8	U	4.8	0.32	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,2-Dichloroethane	4.8	U	4.8	0.28	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,1-Dichloroethene	4.8	U	4.8	0.52	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,2-Dichloropropane	4.8	U	4.8	0.30	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
cis-1,3-Dichloropropene	4.8	U	4.8	0.25	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
trans-1,3-Dichloropropene	4.8	U	4.8	0.20	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Ethylbenzene	4.8	U	4.8	0.26	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
2-Hexanone	19	U	19	0.55	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Methylene Chloride	4.8	U	4.8	0.23	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
4-Methyl-2-pentanone (MIBK)	19	U	19	0.85	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Styrene	4.8	U	4.8	0.26	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,1,2,2-Tetrachloroethane	4.8	U	4.8	0.25	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Tetrachloroethene	0.78	J	4.8	0.35	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Toluene	0.74	J	4.8	0.32	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Trichloroethene	4.8	U	4.8	0.39	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Vinyl chloride	4.8	U	4.8	0.27	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Xylenes, Total	9.6	U	9.6	0.38	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,1,1-Trichloroethane	4.8	U	4.8	0.22	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,1,2-Trichloroethane	4.8	U	4.8	0.37	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Cyclohexane	9.6	U	9.6	0.20	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,2-Dibromo-3-Chloropropane	9.6	U	9.6	0.65	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Ethylene Dibromide	4.8	U	4.8	0.33	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Dichlorodifluoromethane	4.8	U	4.8	0.33	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
cis-1,2-Dichloroethene	4.8	U	4.8	0.27	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
trans-1,2-Dichloroethene	4.8	U	4.8	0.36	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Isopropylbenzene	4.8	U	4.8	0.19	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Methyl acetate	24	U	24	1.1	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Methyl tert-butyl ether	4.8	U	4.8	0.26	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.8	U	4.8	0.47	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,2,4-Trichlorobenzene	4.8	U	4.8	0.23	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,2-Dichlorobenzene	4.8	U	4.8	0.21	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,3-Dichlorobenzene	4.8	U	4.8	0.28	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
1,4-Dichlorobenzene	4.8	U	4.8	0.33	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Trichlorofluoromethane	4.8	U	4.8	0.23	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Chlorodibromomethane	4.8	U	4.8	0.29	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Methylcyclohexane	9.6	U	9.6	0.22	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1
Naphthalene	4.8	U	4.8	0.32	ug/Kg	☼	07/19/17 10:20	07/24/17 16:07	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: S-170718-RA-03

Lab Sample ID: 240-82505-9

Date Collected: 07/18/17 14:50

Matrix: Solid

Date Received: 07/19/17 09:30

Percent Solids: 96.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		61 - 127	07/19/17 10:20	07/24/17 16:07	1
4-Bromofluorobenzene (Surr)	79		61 - 132	07/19/17 10:20	07/24/17 16:07	1
Toluene-d8 (Surr)	89		66 - 125	07/19/17 10:20	07/24/17 16:07	1
Dibromofluoromethane (Surr)	88		43 - 131	07/19/17 10:20	07/24/17 16:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96.6		0.1	0.1	%			07/19/17 14:51	1
Percent Moisture	3.4		0.1	0.1	%			07/19/17 14:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82505-10

Date Collected: 07/17/17 00:00

Matrix: Water

Date Received: 07/19/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			07/21/17 19:04	1
Benzene	1.0	U	1.0	0.28	ug/L			07/21/17 19:04	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			07/21/17 19:04	1
Bromoform	1.0	U	1.0	0.43	ug/L			07/21/17 19:04	1
Bromomethane	1.0	U	1.0	0.42	ug/L			07/21/17 19:04	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			07/21/17 19:04	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			07/21/17 19:04	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			07/21/17 19:04	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			07/21/17 19:04	1
Chloroethane	1.0	U	1.0	0.41	ug/L			07/21/17 19:04	1
Chloroform	1.0	U	1.0	0.31	ug/L			07/21/17 19:04	1
Chloromethane	1.0	U	1.0	0.43	ug/L			07/21/17 19:04	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			07/21/17 19:04	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			07/21/17 19:04	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			07/21/17 19:04	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			07/21/17 19:04	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			07/21/17 19:04	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			07/21/17 19:04	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			07/21/17 19:04	1
2-Hexanone	10	U	10	1.2	ug/L			07/21/17 19:04	1
Methylene Chloride	0.65	J	1.0	0.53	ug/L			07/21/17 19:04	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			07/21/17 19:04	1
Styrene	1.0	U	1.0	0.23	ug/L			07/21/17 19:04	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			07/21/17 19:04	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			07/21/17 19:04	1
Toluene	1.0	U	1.0	0.23	ug/L			07/21/17 19:04	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			07/21/17 19:04	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/21/17 19:04	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			07/21/17 19:04	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/21/17 19:04	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			07/21/17 19:04	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			07/21/17 19:04	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			07/21/17 19:04	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			07/21/17 19:04	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			07/21/17 19:04	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			07/21/17 19:04	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/21/17 19:04	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			07/21/17 19:04	1
Methyl acetate	10	U	10	1.4	ug/L			07/21/17 19:04	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			07/21/17 19:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			07/21/17 19:04	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			07/21/17 19:04	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			07/21/17 19:04	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			07/21/17 19:04	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			07/21/17 19:04	1
Trichlorofluoromethane	1.0	U *	1.0	0.50	ug/L			07/21/17 19:04	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			07/21/17 19:04	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			07/21/17 19:04	1
Naphthalene	1.0	U	1.0	0.25	ug/L			07/21/17 19:04	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82505-10

Date Collected: 07/17/17 00:00

Matrix: Water

Date Received: 07/19/17 09:30

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	143	X	61 - 138		07/21/17 19:04	1
4-Bromofluorobenzene (Surr)	82		69 - 120		07/21/17 19:04	1
Toluene-d8 (Surr)	100		73 - 120		07/21/17 19:04	1
Dibromofluoromethane (Surr)	121		69 - 124		07/21/17 19:04	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (61-127)	BFB (61-132)	TOL (66-125)	DBFM (43-131)
240-82505-1	S-170717-RA-01	92	80	90	89
240-82505-8	S-170718-RA-02	83	84	92	88
240-82505-9	S-170718-RA-03	86	79	89	88
LCS 240-288165/4	Lab Control Sample	83	81	93	89
LCS 240-288397/4	Lab Control Sample	82	82	92	92
MB 240-288165/5	Method Blank	84	80	92	89
MB 240-288397/5	Method Blank	84	80	90	88

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (61-138)	BFB (69-120)	TOL (73-120)	DBFM (69-124)
240-82505-2	W-170717-RA-01	115	87	116	110
240-82505-3	W-170717-RA-02	111	83	111	106
240-82505-4	W-170717-RA-03	112	85	114	107
240-82505-4 MS	W-170717-RA-03	112	92	116	102
240-82505-4 MSD	W-170717-RA-03	117	96	121 X	105
240-82505-5	W-170717-RA-04	115	82	110	107
240-82505-6	W-170717-RA-05	134	79	95	112
240-82505-7	W-170717-RA-06	125	81	96	117
240-82505-10	TRIP BLANK	143 X	82	100	121
LCS 240-288159/4	Lab Control Sample	109	90	113	99
LCS 240-288161/4	Lab Control Sample	112	111	109	110
LCS 240-288349/4	Lab Control Sample	111	92	115	106
MB 240-288159/35	Method Blank	106	81	108	102
MB 240-288161/6	Method Blank	128	86	97	118
MB 240-288349/33	Method Blank	105	79	105	100

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-288159/35

Matrix: Water

Analysis Batch: 288159

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			07/21/17 11:59	1
Benzene	1.0	U	1.0	0.28	ug/L			07/21/17 11:59	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			07/21/17 11:59	1
Bromoform	1.0	U	1.0	0.43	ug/L			07/21/17 11:59	1
Bromomethane	1.0	U	1.0	0.42	ug/L			07/21/17 11:59	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			07/21/17 11:59	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			07/21/17 11:59	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			07/21/17 11:59	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			07/21/17 11:59	1
Chloroethane	1.0	U	1.0	0.41	ug/L			07/21/17 11:59	1
Chloroform	1.0	U	1.0	0.31	ug/L			07/21/17 11:59	1
Chloromethane	1.0	U	1.0	0.43	ug/L			07/21/17 11:59	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			07/21/17 11:59	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			07/21/17 11:59	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			07/21/17 11:59	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			07/21/17 11:59	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			07/21/17 11:59	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			07/21/17 11:59	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			07/21/17 11:59	1
2-Hexanone	10	U	10	1.2	ug/L			07/21/17 11:59	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			07/21/17 11:59	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			07/21/17 11:59	1
Styrene	1.0	U	1.0	0.23	ug/L			07/21/17 11:59	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			07/21/17 11:59	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			07/21/17 11:59	1
Toluene	1.0	U	1.0	0.23	ug/L			07/21/17 11:59	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			07/21/17 11:59	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/21/17 11:59	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			07/21/17 11:59	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/21/17 11:59	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			07/21/17 11:59	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			07/21/17 11:59	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			07/21/17 11:59	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			07/21/17 11:59	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			07/21/17 11:59	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			07/21/17 11:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/21/17 11:59	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			07/21/17 11:59	1
Methyl acetate	10	U	10	1.4	ug/L			07/21/17 11:59	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			07/21/17 11:59	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			07/21/17 11:59	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			07/21/17 11:59	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			07/21/17 11:59	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			07/21/17 11:59	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			07/21/17 11:59	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			07/21/17 11:59	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			07/21/17 11:59	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			07/21/17 11:59	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288159/35
Matrix: Water
Analysis Batch: 288159

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	1.0	U	1.0	0.25	ug/L			07/21/17 11:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		61 - 138		07/21/17 11:59	1
4-Bromofluorobenzene (Surr)	81		69 - 120		07/21/17 11:59	1
Toluene-d8 (Surr)	108		73 - 120		07/21/17 11:59	1
Dibromofluoromethane (Surr)	102		69 - 124		07/21/17 11:59	1

Lab Sample ID: LCS 240-288159/4
Matrix: Water
Analysis Batch: 288159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	14.9		ug/L		74	35 - 131
Benzene	10.0	9.94		ug/L		99	79 - 120
Dichlorobromomethane	10.0	9.36		ug/L		94	79 - 125
Bromoform	10.0	7.84		ug/L		78	55 - 145
Bromomethane	10.0	12.3		ug/L		123	17 - 158
2-Butanone (MEK)	20.0	18.0		ug/L		90	43 - 149
Carbon disulfide	10.0	12.7		ug/L		127	49 - 141
Carbon tetrachloride	10.0	9.02		ug/L		90	55 - 171
Chlorobenzene	10.0	9.58		ug/L		96	80 - 120
Chloroethane	10.0	14.1		ug/L		141	10 - 149
Chloroform	10.0	10.3		ug/L		103	80 - 120
Chloromethane	10.0	10.5		ug/L		105	59 - 124
1,1-Dichloroethane	10.0	10.4		ug/L		104	74 - 120
1,2-Dichloroethane	10.0	10.3		ug/L		103	68 - 133
1,1-Dichloroethene	10.0	11.1		ug/L		111	65 - 127
1,2-Dichloropropane	10.0	10.1		ug/L		101	78 - 127
cis-1,3-Dichloropropene	10.0	8.92		ug/L		89	75 - 120
trans-1,3-Dichloropropene	10.0	9.77		ug/L		98	67 - 120
Ethylbenzene	10.0	9.29		ug/L		93	80 - 120
2-Hexanone	20.0	18.7		ug/L		93	28 - 169
Methylene Chloride	10.0	10.8		ug/L		108	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	18.1		ug/L		91	53 - 144
Styrene	10.0	8.47		ug/L		85	80 - 121
1,1,2,2-Tetrachloroethane	10.0	11.3		ug/L		113	58 - 122
Tetrachloroethene	10.0	9.75		ug/L		97	80 - 122
Toluene	10.0	10.9		ug/L		109	78 - 120
Trichloroethene	10.0	9.36		ug/L		94	76 - 124
Vinyl chloride	10.0	11.2		ug/L		112	65 - 124
Xylenes, Total	20.0	17.7		ug/L		88	80 - 120
1,1,1-Trichloroethane	10.0	10.3		ug/L		103	64 - 147
1,1,2-Trichloroethane	10.0	11.3		ug/L		113	76 - 121
Cyclohexane	10.0	11.7		ug/L		117	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	9.96		ug/L		100	50 - 130
Ethylene Dibromide	10.0	9.68		ug/L		97	80 - 120
Dichlorodifluoromethane	10.0	12.9		ug/L		129	42 - 141

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288159/4

Matrix: Water

Analysis Batch: 288159

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	10.0	9.76		ug/L		98	77 - 120
trans-1,2-Dichloroethene	10.0	9.79		ug/L		98	74 - 124
Isopropylbenzene	10.0	8.25		ug/L		82	80 - 128
Methyl acetate	20.0	20.6		ug/L		103	63 - 137
Methyl tert-butyl ether	10.0	9.15		ug/L		91	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.4		ug/L		104	65 - 144
1,2,4-Trichlorobenzene	10.0	10.1		ug/L		101	34 - 141
1,2-Dichlorobenzene	10.0	9.44		ug/L		94	80 - 120
1,3-Dichlorobenzene	10.0	8.90		ug/L		89	80 - 120
1,4-Dichlorobenzene	10.0	9.17		ug/L		92	80 - 120
Trichlorofluoromethane	10.0	12.8		ug/L		128	27 - 176
Chlorodibromomethane	10.0	9.33		ug/L		93	64 - 129
Methylcyclohexane	10.0	9.54		ug/L		95	63 - 141
m-Xylene & p-Xylene	10.0	8.97		ug/L		90	80 - 120
o-Xylene	10.0	8.69		ug/L		87	80 - 120
Naphthalene	10.0	10.8		ug/L		108	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	109		61 - 138
4-Bromofluorobenzene (Surr)	90		69 - 120
Toluene-d8 (Surr)	113		73 - 120
Dibromofluoromethane (Surr)	99		69 - 124

Lab Sample ID: 240-82505-4 MS

Matrix: Water

Analysis Batch: 288159

Client Sample ID: W-170717-RA-03

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	5000	U	10000	7850		ug/L		78	19 - 133
Benzene	500	U	5000	5290		ug/L		106	69 - 127
Dichlorobromomethane	500	U	5000	4990		ug/L		100	75 - 128
Bromoform	500	U	5000	3750		ug/L		75	61 - 135
Bromomethane	500	U	5000	6550		ug/L		131	10 - 148
2-Butanone (MEK)	5000	U	10000	9570		ug/L		96	34 - 153
Carbon disulfide	500	U	5000	6310		ug/L		126	46 - 143
Carbon tetrachloride	500	U	5000	4270		ug/L		85	53 - 175
Chlorobenzene	500	U	5000	5110		ug/L		102	76 - 120
Chloroethane	500	U F1	5000	7170	F1	ug/L		143	10 - 141
Chloroform	500	U	5000	5450		ug/L		109	74 - 125
Chloromethane	500	U	5000	5450		ug/L		109	34 - 127
1,1-Dichloroethane	500	U	5000	5490		ug/L		110	69 - 122
1,2-Dichloroethane	500	U	5000	5750		ug/L		115	64 - 138
1,1-Dichloroethene	500	U	5000	5460		ug/L		109	62 - 127
1,2-Dichloropropane	500	U	5000	5420		ug/L		108	72 - 131
cis-1,3-Dichloropropene	500	U	5000	4520		ug/L		90	68 - 120
trans-1,3-Dichloropropene	500	U	5000	4820		ug/L		96	59 - 120
Ethylbenzene	500	U	5000	4830		ug/L		97	72 - 121

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-82505-4 MS
Matrix: Water
Analysis Batch: 288159

Client Sample ID: W-170717-RA-03
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
2-Hexanone	5000	U	10000	10100		ug/L		101	21 - 184
Methylene Chloride	500	U	5000	6030		ug/L		121	52 - 137
4-Methyl-2-pentanone (MIBK)	5000	U	10000	9980		ug/L		100	53 - 147
Styrene	500	U	5000	4510		ug/L		90	74 - 125
1,1,2,2-Tetrachloroethane	500	U F1	5000	6110		ug/L		122	51 - 123
Tetrachloroethene	15000		5000	19900		ug/L		99	69 - 126
Toluene	500	U	5000	5630		ug/L		113	69 - 125
Trichloroethene	500	U	5000	4750		ug/L		95	68 - 129
Vinyl chloride	500	U	5000	5390		ug/L		108	55 - 123
Xylenes, Total	1000	U	10000	9410		ug/L		94	71 - 122
1,1,1-Trichloroethane	500	U	5000	5150		ug/L		103	57 - 156
1,1,2-Trichloroethane	500	U	5000	6070		ug/L		121	68 - 127
Cyclohexane	500	U	5000	4160		ug/L		83	56 - 135
1,2-Dibromo-3-Chloropropane	1000	U	5000	4840		ug/L		97	48 - 130
Ethylene Dibromide	500	U	5000	5180		ug/L		104	73 - 121
Dichlorodifluoromethane	500	U F2	5000	3600		ug/L		72	45 - 130
cis-1,2-Dichloroethene	500	U	5000	5130		ug/L		103	69 - 127
trans-1,2-Dichloroethene	500	U	5000	5040		ug/L		101	66 - 131
Isopropylbenzene	500	U	5000	4160		ug/L		83	70 - 132
Methyl acetate	5000	U	10000	11200		ug/L		112	52 - 139
Methyl tert-butyl ether	500	U	5000	4870		ug/L		97	67 - 125
1,1,2-Trichloro-1,2,2-trifluoroethane	500	U	5000	3370		ug/L		67	58 - 137
1,2,4-Trichlorobenzene	500	U	5000	4930		ug/L		99	26 - 138
1,2-Dichlorobenzene	500	U	5000	5120		ug/L		102	70 - 120
1,3-Dichlorobenzene	500	U	5000	4610		ug/L		92	71 - 120
1,4-Dichlorobenzene	500	U	5000	4760		ug/L		95	72 - 120
Trichlorofluoromethane	500	U	5000	4830		ug/L		97	28 - 172
Chlorodibromomethane	500	U	5000	4620		ug/L		92	62 - 131
Methylcyclohexane	500	U F2	5000	3030		ug/L		61	46 - 139
m-Xylene & p-Xylene	1000	U	5000	4740		ug/L		95	70 - 121
o-Xylene	500	U	5000	4670		ug/L		93	71 - 125
Naphthalene	500	U	5000	5530		ug/L		111	28 - 150

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	112		61 - 138
4-Bromofluorobenzene (Surr)	92		69 - 120
Toluene-d8 (Surr)	116		73 - 120
Dibromofluoromethane (Surr)	102		69 - 124

Lab Sample ID: 240-82505-4 MSD
Matrix: Water
Analysis Batch: 288159

Client Sample ID: W-170717-RA-03
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	
	Result	Qualifier	Added	Result	Qualifier					RPD	Limit
Acetone	5000	U	10000	8630		ug/L		86	19 - 133	9	35
Benzene	500	U	5000	5030		ug/L		101	69 - 127	5	10
Dichlorobromomethane	500	U	5000	4720		ug/L		94	75 - 128	5	13

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-82505-4 MSD
Matrix: Water
Analysis Batch: 288159

Client Sample ID: W-170717-RA-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromoform	500	U	5000	3830		ug/L		77	61 - 135	2	13
Bromomethane	500	U	5000	6290		ug/L		126	10 - 148	4	35
2-Butanone (MEK)	5000	U	10000	9220		ug/L		92	34 - 153	4	23
Carbon disulfide	500	U	5000	6350		ug/L		127	46 - 143	1	18
Carbon tetrachloride	500	U	5000	4500		ug/L		90	53 - 175	5	17
Chlorobenzene	500	U	5000	4900		ug/L		98	76 - 120	4	12
Chloroethane	500	U F1	5000	7240	F1	ug/L		145	10 - 141	1	35
Chloroform	500	U	5000	5200		ug/L		104	74 - 125	5	11
Chloromethane	500	U	5000	5410		ug/L		108	34 - 127	1	25
1,1-Dichloroethane	500	U	5000	5310		ug/L		106	69 - 122	3	11
1,2-Dichloroethane	500	U	5000	5490		ug/L		110	64 - 138	5	11
1,1-Dichloroethene	500	U	5000	5570		ug/L		111	62 - 127	2	14
1,2-Dichloropropane	500	U	5000	5240		ug/L		105	72 - 131	3	12
cis-1,3-Dichloropropene	500	U	5000	4430		ug/L		89	68 - 120	2	13
trans-1,3-Dichloropropene	500	U	5000	4670		ug/L		93	59 - 120	3	14
Ethylbenzene	500	U	5000	4720		ug/L		94	72 - 121	2	15
2-Hexanone	5000	U	10000	10800		ug/L		108	21 - 184	6	12
Methylene Chloride	500	U	5000	5750		ug/L		115	52 - 137	5	12
4-Methyl-2-pentanone (MIBK)	5000	U	10000	10600		ug/L		106	53 - 147	6	16
Styrene	500	U	5000	4410		ug/L		88	74 - 125	2	14
1,1,2,2-Tetrachloroethane	500	U F1	5000	6240	F1	ug/L		125	51 - 123	2	17
Tetrachloroethene	15000		5000	20000	E	ug/L		101	69 - 126	1	18
Toluene	500	U	5000	5520		ug/L		110	69 - 125	2	14
Trichloroethene	500	U	5000	4680		ug/L		94	68 - 129	1	12
Vinyl chloride	500	U	5000	5700		ug/L		114	55 - 123	6	12
Xylenes, Total	1000	U	10000	8900		ug/L		89	71 - 122	6	14
1,1,1-Trichloroethane	500	U	5000	5140		ug/L		103	57 - 156	0	13
1,1,2-Trichloroethane	500	U	5000	5930		ug/L		119	68 - 127	2	11
Cyclohexane	500	U	5000	5570		ug/L		111	56 - 135	29	35
1,2-Dibromo-3-Chloropropane	1000	U	5000	5140		ug/L		103	48 - 130	6	31
Ethylene Dibromide	500	U	5000	5090		ug/L		102	73 - 121	2	12
Dichlorodifluoromethane	500	U F2	5000	6090	F2	ug/L		122	45 - 130	51	34
cis-1,2-Dichloroethene	500	U	5000	5010		ug/L		100	69 - 127	2	11
trans-1,2-Dichloroethene	500	U	5000	5040		ug/L		101	66 - 131	0	11
Isopropylbenzene	500	U	5000	4050		ug/L		81	70 - 132	3	16
Methyl acetate	5000	U	10000	11200		ug/L		112	52 - 139	0	14
Methyl tert-butyl ether	500	U	5000	4850		ug/L		97	67 - 125	0	12
1,1,2-Trichloro-1,2,2-trifluoroethane	500	U	5000	4790		ug/L		96	58 - 137	35	35
1,2,4-Trichlorobenzene	500	U	5000	4850		ug/L		97	26 - 138	2	35
1,2-Dichlorobenzene	500	U	5000	4900		ug/L		98	70 - 120	4	19
1,3-Dichlorobenzene	500	U	5000	4590		ug/L		92	71 - 120	1	18
1,4-Dichlorobenzene	500	U	5000	4650		ug/L		93	72 - 120	2	17
Trichlorofluoromethane	500	U	5000	6160		ug/L		123	28 - 172	24	26
Chlorodibromomethane	500	U	5000	4640		ug/L		93	62 - 131	0	15
Methylcyclohexane	500	U F2	5000	4430	F2	ug/L		89	46 - 139	37	35
m-Xylene & p-Xylene	1000	U	5000	4460		ug/L		89	70 - 121	6	15
o-Xylene	500	U	5000	4440		ug/L		89	71 - 125	5	15

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-82505-4 MSD
Matrix: Water
Analysis Batch: 288159

Client Sample ID: W-170717-RA-03
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	500	U	5000	5580		ug/L		112	28 - 150	1	35
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	117		61 - 138								
4-Bromofluorobenzene (Surr)	96		69 - 120								
Toluene-d8 (Surr)	121	X	73 - 120								
Dibromofluoromethane (Surr)	105		69 - 124								

Lab Sample ID: MB 240-288161/6
Matrix: Water
Analysis Batch: 288161

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			07/21/17 11:51	1
Benzene	1.0	U	1.0	0.28	ug/L			07/21/17 11:51	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			07/21/17 11:51	1
Bromoform	1.0	U	1.0	0.43	ug/L			07/21/17 11:51	1
Bromomethane	1.0	U	1.0	0.42	ug/L			07/21/17 11:51	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			07/21/17 11:51	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			07/21/17 11:51	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			07/21/17 11:51	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			07/21/17 11:51	1
Chloroethane	1.0	U	1.0	0.41	ug/L			07/21/17 11:51	1
Chloroform	1.0	U	1.0	0.31	ug/L			07/21/17 11:51	1
Chloromethane	1.0	U	1.0	0.43	ug/L			07/21/17 11:51	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			07/21/17 11:51	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			07/21/17 11:51	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			07/21/17 11:51	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			07/21/17 11:51	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			07/21/17 11:51	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			07/21/17 11:51	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			07/21/17 11:51	1
2-Hexanone	10	U	10	1.2	ug/L			07/21/17 11:51	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			07/21/17 11:51	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			07/21/17 11:51	1
Styrene	1.0	U	1.0	0.23	ug/L			07/21/17 11:51	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			07/21/17 11:51	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			07/21/17 11:51	1
Toluene	1.0	U	1.0	0.23	ug/L			07/21/17 11:51	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			07/21/17 11:51	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/21/17 11:51	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			07/21/17 11:51	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/21/17 11:51	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			07/21/17 11:51	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			07/21/17 11:51	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			07/21/17 11:51	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			07/21/17 11:51	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			07/21/17 11:51	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288161/6
Matrix: Water
Analysis Batch: 288161

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			07/21/17 11:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/21/17 11:51	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			07/21/17 11:51	1
Methyl acetate	10	U	10	1.4	ug/L			07/21/17 11:51	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			07/21/17 11:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			07/21/17 11:51	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			07/21/17 11:51	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			07/21/17 11:51	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			07/21/17 11:51	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			07/21/17 11:51	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			07/21/17 11:51	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			07/21/17 11:51	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			07/21/17 11:51	1
Naphthalene	1.0	U	1.0	0.25	ug/L			07/21/17 11:51	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	128		61 - 138		07/21/17 11:51	1
4-Bromofluorobenzene (Surr)	86		69 - 120		07/21/17 11:51	1
Toluene-d8 (Surr)	97		73 - 120		07/21/17 11:51	1
Dibromofluoromethane (Surr)	118		69 - 124		07/21/17 11:51	1

Lab Sample ID: LCS 240-288161/4
Matrix: Water
Analysis Batch: 288161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.6		ug/L		106	79 - 120
Dichlorobromomethane	10.0	11.5		ug/L		115	79 - 125
Bromoform	10.0	8.59		ug/L		86	55 - 145
Bromomethane	10.0	9.64		ug/L		96	17 - 158
2-Butanone (MEK)	20.0	17.2		ug/L		86	43 - 149
Carbon disulfide	10.0	9.73		ug/L		97	49 - 141
Carbon tetrachloride	10.0	15.2		ug/L		152	55 - 171
Chlorobenzene	10.0	10.1		ug/L		101	80 - 120
Chloroethane	10.0	3.33		ug/L		33	10 - 149
Chloroform	10.0	11.1		ug/L		111	80 - 120
Chloromethane	10.0	7.60		ug/L		76	59 - 124
1,1-Dichloroethane	10.0	10.0		ug/L		100	74 - 120
1,2-Dichloroethane	10.0	11.8		ug/L		118	68 - 133
1,1-Dichloroethene	10.0	10.3		ug/L		103	65 - 127
1,2-Dichloropropane	10.0	10.7		ug/L		107	78 - 127
cis-1,3-Dichloropropene	10.0	9.79		ug/L		98	75 - 120
trans-1,3-Dichloropropene	10.0	9.29		ug/L		93	67 - 120
Ethylbenzene	10.0	10.1		ug/L		101	80 - 120
2-Hexanone	20.0	17.3		ug/L		86	28 - 169
Methylene Chloride	10.0	10.4		ug/L		104	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	19.5		ug/L		98	53 - 144

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288161/4

Matrix: Water

Analysis Batch: 288161

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Styrene	10.0	10.5		ug/L		105	80 - 121
1,1,2,2-Tetrachloroethane	10.0	8.28		ug/L		83	58 - 122
Tetrachloroethene	10.0	9.58		ug/L		96	80 - 122
Toluene	10.0	10.6		ug/L		106	78 - 120
Trichloroethene	10.0	10.2		ug/L		102	76 - 124
Vinyl chloride	10.0	10.2		ug/L		102	65 - 124
Xylenes, Total	20.0	20.1		ug/L		101	80 - 120
1,1,1-Trichloroethane	10.0	14.0		ug/L		140	64 - 147
1,1,2-Trichloroethane	10.0	10.2		ug/L		102	76 - 121
Cyclohexane	10.0	9.84		ug/L		98	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	6.60		ug/L		66	50 - 130
Ethylene Dibromide	10.0	9.70		ug/L		97	80 - 120
Dichlorodifluoromethane	10.0	12.4		ug/L		124	42 - 141
cis-1,2-Dichloroethene	10.0	10.3		ug/L		103	77 - 120
trans-1,2-Dichloroethene	10.0	10.3		ug/L		103	74 - 124
Isopropylbenzene	10.0	10.9		ug/L		109	80 - 128
Methyl acetate	20.0	19.4		ug/L		97	63 - 137
Methyl tert-butyl ether	10.0	9.80		ug/L		98	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.1		ug/L		121	65 - 144
1,2,4-Trichlorobenzene	10.0	7.75		ug/L		78	34 - 141
1,2-Dichlorobenzene	10.0	9.40		ug/L		94	80 - 120
1,3-Dichlorobenzene	10.0	9.38		ug/L		94	80 - 120
1,4-Dichlorobenzene	10.0	9.37		ug/L		94	80 - 120
Trichlorofluoromethane	10.0	23.3	*	ug/L		233	27 - 176
Chlorodibromomethane	10.0	10.6		ug/L		106	64 - 129
Methylcyclohexane	10.0	9.41		ug/L		94	63 - 141
m-Xylene & p-Xylene	10.0	9.92		ug/L		99	80 - 120
o-Xylene	10.0	10.2		ug/L		102	80 - 120
Naphthalene	10.0	6.51		ug/L		65	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	112		61 - 138
4-Bromofluorobenzene (Surr)	111		69 - 120
Toluene-d8 (Surr)	109		73 - 120
Dibromofluoromethane (Surr)	110		69 - 124

Lab Sample ID: MB 240-288165/5

Matrix: Solid

Analysis Batch: 288165

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	12.3	J	20	3.1	ug/Kg			07/21/17 11:10	1
Benzene	5.0	U	5.0	0.32	ug/Kg			07/21/17 11:10	1
Dichlorobromomethane	5.0	U	5.0	0.33	ug/Kg			07/21/17 11:10	1
Bromoform	5.0	U	5.0	0.40	ug/Kg			07/21/17 11:10	1
Bromomethane	5.0	U	5.0	0.59	ug/Kg			07/21/17 11:10	1
2-Butanone (MEK)	2.49	J	20	1.3	ug/Kg			07/21/17 11:10	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288165/5

Matrix: Solid

Analysis Batch: 288165

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Carbon disulfide	5.0	U	5.0	0.21	ug/Kg			07/21/17 11:10	1
Carbon tetrachloride	5.0	U	5.0	0.25	ug/Kg			07/21/17 11:10	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			07/21/17 11:10	1
Chloroethane	5.0	U	5.0	0.38	ug/Kg			07/21/17 11:10	1
Chloroform	5.0	U	5.0	0.23	ug/Kg			07/21/17 11:10	1
Chloromethane	5.0	U	5.0	0.38	ug/Kg			07/21/17 11:10	1
1,1-Dichloroethane	5.0	U	5.0	0.33	ug/Kg			07/21/17 11:10	1
1,2-Dichloroethane	5.0	U	5.0	0.29	ug/Kg			07/21/17 11:10	1
1,1-Dichloroethene	5.0	U	5.0	0.54	ug/Kg			07/21/17 11:10	1
1,2-Dichloropropane	5.0	U	5.0	0.31	ug/Kg			07/21/17 11:10	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.26	ug/Kg			07/21/17 11:10	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.21	ug/Kg			07/21/17 11:10	1
Ethylbenzene	5.0	U	5.0	0.27	ug/Kg			07/21/17 11:10	1
2-Hexanone	20	U	20	0.58	ug/Kg			07/21/17 11:10	1
Methylene Chloride	0.265	J	5.0	0.24	ug/Kg			07/21/17 11:10	1
4-Methyl-2-pentanone (MIBK)	20	U	20	0.89	ug/Kg			07/21/17 11:10	1
Styrene	5.0	U	5.0	0.27	ug/Kg			07/21/17 11:10	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.26	ug/Kg			07/21/17 11:10	1
Tetrachloroethene	5.0	U	5.0	0.37	ug/Kg			07/21/17 11:10	1
Toluene	5.0	U	5.0	0.34	ug/Kg			07/21/17 11:10	1
Trichloroethene	5.0	U	5.0	0.41	ug/Kg			07/21/17 11:10	1
Vinyl chloride	5.0	U	5.0	0.28	ug/Kg			07/21/17 11:10	1
Xylenes, Total	10	U	10	0.40	ug/Kg			07/21/17 11:10	1
1,1,1-Trichloroethane	5.0	U	5.0	0.23	ug/Kg			07/21/17 11:10	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			07/21/17 11:10	1
Cyclohexane	10	U	10	0.21	ug/Kg			07/21/17 11:10	1
1,2-Dibromo-3-Chloropropane	10	U	10	0.68	ug/Kg			07/21/17 11:10	1
Ethylene Dibromide	5.0	U	5.0	0.35	ug/Kg			07/21/17 11:10	1
Dichlorodifluoromethane	5.0	U	5.0	0.35	ug/Kg			07/21/17 11:10	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.28	ug/Kg			07/21/17 11:10	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.38	ug/Kg			07/21/17 11:10	1
Isopropylbenzene	5.0	U	5.0	0.20	ug/Kg			07/21/17 11:10	1
Methyl acetate	25	U	25	1.2	ug/Kg			07/21/17 11:10	1
Methyl tert-butyl ether	5.0	U	5.0	0.27	ug/Kg			07/21/17 11:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	0.49	ug/Kg			07/21/17 11:10	1
1,2,4-Trichlorobenzene	0.441	J	5.0	0.24	ug/Kg			07/21/17 11:10	1
1,2-Dichlorobenzene	5.0	U	5.0	0.22	ug/Kg			07/21/17 11:10	1
1,3-Dichlorobenzene	5.0	U	5.0	0.29	ug/Kg			07/21/17 11:10	1
1,4-Dichlorobenzene	5.0	U	5.0	0.35	ug/Kg			07/21/17 11:10	1
Trichlorofluoromethane	5.0	U	5.0	0.24	ug/Kg			07/21/17 11:10	1
Chlorodibromomethane	5.0	U	5.0	0.30	ug/Kg			07/21/17 11:10	1
Methylcyclohexane	10	U	10	0.23	ug/Kg			07/21/17 11:10	1
Naphthalene	0.613	J	5.0	0.33	ug/Kg			07/21/17 11:10	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	84		61 - 127		07/21/17 11:10	1
4-Bromofluorobenzene (Surr)	80		61 - 132		07/21/17 11:10	1
Toluene-d8 (Surr)	92		66 - 125		07/21/17 11:10	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288165/5
Matrix: Solid
Analysis Batch: 288165

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	<i>MB MB</i> %Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	89		43 - 131		07/21/17 11:10	1

Lab Sample ID: LCS 240-288165/4
Matrix: Solid
Analysis Batch: 288165

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	98.6		ug/Kg		99	24 - 125
Benzene	50.0	41.9		ug/Kg		84	77 - 120
Dichlorobromomethane	50.0	44.6		ug/Kg		89	61 - 132
Bromoform	50.0	47.6		ug/Kg		95	40 - 140
Bromomethane	20.0	16.6		ug/Kg		83	10 - 153
2-Butanone (MEK)	100	104		ug/Kg		104	51 - 120
Carbon disulfide	50.0	43.4		ug/Kg		87	17 - 163
Carbon tetrachloride	50.0	44.1		ug/Kg		88	43 - 144
Chlorobenzene	50.0	41.9		ug/Kg		84	76 - 120
Chloroethane	20.0	16.4		ug/Kg		82	10 - 166
Chloroform	50.0	42.4		ug/Kg		85	74 - 120
Chloromethane	20.0	18.2		ug/Kg		91	41 - 124
1,1-Dichloroethane	50.0	42.2		ug/Kg		84	72 - 120
1,2-Dichloroethane	50.0	43.0		ug/Kg		86	71 - 120
1,1-Dichloroethene	50.0	44.9		ug/Kg		90	58 - 130
1,2-Dichloropropane	50.0	44.3		ug/Kg		89	78 - 122
cis-1,3-Dichloropropene	50.0	43.5		ug/Kg		87	66 - 126
trans-1,3-Dichloropropene	50.0	36.7		ug/Kg		73	55 - 121
Ethylbenzene	50.0	43.3		ug/Kg		87	76 - 120
2-Hexanone	100	98.1		ug/Kg		98	52 - 129
Methylene Chloride	50.0	42.0		ug/Kg		84	64 - 126
4-Methyl-2-pentanone (MIBK)	100	98.7		ug/Kg		99	65 - 131
Styrene	50.0	43.0		ug/Kg		86	80 - 120
1,1,2,2-Tetrachloroethane	50.0	44.1		ug/Kg		88	78 - 120
Tetrachloroethene	50.0	43.0		ug/Kg		86	68 - 122
Toluene	50.0	41.0		ug/Kg		82	74 - 120
Trichloroethene	50.0	43.7		ug/Kg		87	73 - 123
Vinyl chloride	20.0	17.7		ug/Kg		88	49 - 131
Xylenes, Total	100	86.3		ug/Kg		86	78 - 120
1,1,1-Trichloroethane	50.0	44.7		ug/Kg		89	60 - 136
1,1,2-Trichloroethane	50.0	44.4		ug/Kg		89	80 - 120
Cyclohexane	50.0	45.1		ug/Kg		90	66 - 129
1,2-Dibromo-3-Chloropropane	50.0	41.2		ug/Kg		82	40 - 133
Ethylene Dibromide	50.0	44.5		ug/Kg		89	80 - 120
Dichlorodifluoromethane	20.0	19.9		ug/Kg		99	15 - 127
cis-1,2-Dichloroethene	50.0	41.9		ug/Kg		84	78 - 120
trans-1,2-Dichloroethene	50.0	44.4		ug/Kg		89	74 - 124
Isopropylbenzene	50.0	45.2		ug/Kg		90	76 - 124
Methyl acetate	100	87.9		ug/Kg		88	63 - 126
Methyl tert-butyl ether	50.0	42.5		ug/Kg		85	68 - 129

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288165/4
Matrix: Solid
Analysis Batch: 288165

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	44.3		ug/Kg		89	64 - 125
1,2,4-Trichlorobenzene	50.0	38.7		ug/Kg		77	60 - 124
1,2-Dichlorobenzene	50.0	39.2		ug/Kg		78	75 - 120
1,3-Dichlorobenzene	50.0	39.8		ug/Kg		80	72 - 120
1,4-Dichlorobenzene	50.0	39.0		ug/Kg		78	71 - 120
Trichlorofluoromethane	20.0	18.6		ug/Kg		93	28 - 152
Chlorodibromomethane	50.0	46.3		ug/Kg		93	46 - 125
Methylcyclohexane	50.0	43.4		ug/Kg		87	71 - 126
m-Xylene & p-Xylene	50.0	43.0		ug/Kg		86	78 - 120
o-Xylene	50.0	43.3		ug/Kg		87	77 - 120
Naphthalene	50.0	41.9		ug/Kg		84	68 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	83		61 - 127
4-Bromofluorobenzene (Surr)	81		61 - 132
Toluene-d8 (Surr)	93		66 - 125
Dibromofluoromethane (Surr)	89		43 - 131

Lab Sample ID: MB 240-288349/33
Matrix: Water
Analysis Batch: 288349

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			07/24/17 09:50	1
Benzene	1.0	U	1.0	0.28	ug/L			07/24/17 09:50	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			07/24/17 09:50	1
Bromoform	1.0	U	1.0	0.43	ug/L			07/24/17 09:50	1
Bromomethane	1.0	U	1.0	0.42	ug/L			07/24/17 09:50	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			07/24/17 09:50	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			07/24/17 09:50	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			07/24/17 09:50	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			07/24/17 09:50	1
Chloroethane	1.0	U	1.0	0.41	ug/L			07/24/17 09:50	1
Chloroform	1.0	U	1.0	0.31	ug/L			07/24/17 09:50	1
Chloromethane	1.0	U	1.0	0.43	ug/L			07/24/17 09:50	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			07/24/17 09:50	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			07/24/17 09:50	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			07/24/17 09:50	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			07/24/17 09:50	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			07/24/17 09:50	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			07/24/17 09:50	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			07/24/17 09:50	1
2-Hexanone	10	U	10	1.2	ug/L			07/24/17 09:50	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			07/24/17 09:50	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			07/24/17 09:50	1
Styrene	1.0	U	1.0	0.23	ug/L			07/24/17 09:50	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			07/24/17 09:50	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288349/33
Matrix: Water
Analysis Batch: 288349

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			07/24/17 09:50	1
Toluene	1.0	U	1.0	0.23	ug/L			07/24/17 09:50	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			07/24/17 09:50	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/24/17 09:50	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			07/24/17 09:50	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/24/17 09:50	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			07/24/17 09:50	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			07/24/17 09:50	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			07/24/17 09:50	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			07/24/17 09:50	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			07/24/17 09:50	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			07/24/17 09:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/24/17 09:50	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			07/24/17 09:50	1
Methyl acetate	10	U	10	1.4	ug/L			07/24/17 09:50	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			07/24/17 09:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			07/24/17 09:50	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			07/24/17 09:50	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			07/24/17 09:50	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			07/24/17 09:50	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			07/24/17 09:50	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			07/24/17 09:50	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			07/24/17 09:50	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			07/24/17 09:50	1
Naphthalene	1.0	U	1.0	0.25	ug/L			07/24/17 09:50	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	105		61 - 138		07/24/17 09:50	1
4-Bromofluorobenzene (Surr)	79		69 - 120		07/24/17 09:50	1
Toluene-d8 (Surr)	105		73 - 120		07/24/17 09:50	1
Dibromofluoromethane (Surr)	100		69 - 124		07/24/17 09:50	1

Lab Sample ID: LCS 240-288349/4
Matrix: Water
Analysis Batch: 288349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.5		ug/L		105	79 - 120
Dichlorobromomethane	10.0	10.3		ug/L		103	79 - 125
Bromoform	10.0	8.48		ug/L		85	55 - 145
Bromomethane	10.0	12.0		ug/L		120	17 - 158
2-Butanone (MEK)	20.0	20.2		ug/L		101	43 - 149
Carbon disulfide	10.0	12.1		ug/L		121	49 - 141
Carbon tetrachloride	10.0	9.26		ug/L		93	55 - 171
Chlorobenzene	10.0	10.4		ug/L		104	80 - 120
Chloroethane	10.0	12.6		ug/L		126	10 - 149
Chloroform	10.0	10.8		ug/L		108	80 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288349/4

Matrix: Water

Analysis Batch: 288349

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	9.67		ug/L		97	59 - 124
1,1-Dichloroethane	10.0	11.1		ug/L		111	74 - 120
1,2-Dichloroethane	10.0	11.5		ug/L		115	68 - 133
1,1-Dichloroethene	10.0	10.3		ug/L		103	65 - 127
1,2-Dichloropropane	10.0	10.9		ug/L		109	78 - 127
cis-1,3-Dichloropropene	10.0	9.69		ug/L		97	75 - 120
trans-1,3-Dichloropropene	10.0	10.3		ug/L		103	67 - 120
Ethylbenzene	10.0	9.89		ug/L		99	80 - 120
2-Hexanone	20.0	20.2		ug/L		101	28 - 169
Methylene Chloride	10.0	12.2		ug/L		122	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	20.2		ug/L		101	53 - 144
Styrene	10.0	9.29		ug/L		93	80 - 121
1,1,2,2-Tetrachloroethane	10.0	12.5	*	ug/L		125	58 - 122
Tetrachloroethene	10.0	9.90		ug/L		99	80 - 122
Toluene	10.0	11.2		ug/L		112	78 - 120
Trichloroethene	10.0	9.84		ug/L		98	76 - 124
Vinyl chloride	10.0	8.43		ug/L		84	65 - 124
Xylenes, Total	20.0	19.3		ug/L		96	80 - 120
1,1,1-Trichloroethane	10.0	10.5		ug/L		105	64 - 147
1,1,2-Trichloroethane	10.0	12.2	*	ug/L		122	76 - 121
Cyclohexane	10.0	10.3		ug/L		103	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	10.4		ug/L		104	50 - 130
Ethylene Dibromide	10.0	10.5		ug/L		105	80 - 120
Dichlorodifluoromethane	10.0	6.23		ug/L		62	42 - 141
cis-1,2-Dichloroethene	10.0	10.7		ug/L		107	77 - 120
trans-1,2-Dichloroethene	10.0	10.3		ug/L		103	74 - 124
Isopropylbenzene	10.0	8.50		ug/L		85	80 - 128
Methyl acetate	20.0	22.1		ug/L		111	63 - 137
Methyl tert-butyl ether	10.0	10.1		ug/L		101	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.13		ug/L		91	65 - 144
1,2,4-Trichlorobenzene	10.0	10.9		ug/L		109	34 - 141
1,2-Dichlorobenzene	10.0	10.1		ug/L		101	80 - 120
1,3-Dichlorobenzene	10.0	9.70		ug/L		97	80 - 120
1,4-Dichlorobenzene	10.0	10.0		ug/L		100	80 - 120
Trichlorofluoromethane	10.0	7.57		ug/L		76	27 - 176
Chlorodibromomethane	10.0	10.2		ug/L		102	64 - 129
Methylcyclohexane	10.0	8.07		ug/L		81	63 - 141
m-Xylene & p-Xylene	10.0	9.78		ug/L		98	80 - 120
o-Xylene	10.0	9.50		ug/L		95	80 - 120
Naphthalene	10.0	11.6		ug/L		116	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		61 - 138
4-Bromofluorobenzene (Surr)	92		69 - 120
Toluene-d8 (Surr)	115		73 - 120
Dibromofluoromethane (Surr)	106		69 - 124

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288397/5

Matrix: Solid

Analysis Batch: 288397

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	6.27	J	20	3.1	ug/Kg			07/24/17 12:43	1
Benzene	5.0	U	5.0	0.32	ug/Kg			07/24/17 12:43	1
Dichlorobromomethane	5.0	U	5.0	0.33	ug/Kg			07/24/17 12:43	1
Bromoform	5.0	U	5.0	0.40	ug/Kg			07/24/17 12:43	1
Bromomethane	5.0	U	5.0	0.59	ug/Kg			07/24/17 12:43	1
2-Butanone (MEK)	3.52	J	20	1.3	ug/Kg			07/24/17 12:43	1
Carbon disulfide	5.0	U	5.0	0.21	ug/Kg			07/24/17 12:43	1
Carbon tetrachloride	5.0	U	5.0	0.25	ug/Kg			07/24/17 12:43	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			07/24/17 12:43	1
Chloroethane	5.0	U	5.0	0.38	ug/Kg			07/24/17 12:43	1
Chloroform	5.0	U	5.0	0.23	ug/Kg			07/24/17 12:43	1
Chloromethane	5.0	U	5.0	0.38	ug/Kg			07/24/17 12:43	1
1,1-Dichloroethane	5.0	U	5.0	0.33	ug/Kg			07/24/17 12:43	1
1,2-Dichloroethane	5.0	U	5.0	0.29	ug/Kg			07/24/17 12:43	1
1,1-Dichloroethene	5.0	U	5.0	0.54	ug/Kg			07/24/17 12:43	1
1,2-Dichloropropane	5.0	U	5.0	0.31	ug/Kg			07/24/17 12:43	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.26	ug/Kg			07/24/17 12:43	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.21	ug/Kg			07/24/17 12:43	1
Ethylbenzene	5.0	U	5.0	0.27	ug/Kg			07/24/17 12:43	1
2-Hexanone	20	U	20	0.58	ug/Kg			07/24/17 12:43	1
Methylene Chloride	0.396	J	5.0	0.24	ug/Kg			07/24/17 12:43	1
4-Methyl-2-pentanone (MIBK)	20	U	20	0.89	ug/Kg			07/24/17 12:43	1
Styrene	5.0	U	5.0	0.27	ug/Kg			07/24/17 12:43	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.26	ug/Kg			07/24/17 12:43	1
Tetrachloroethene	5.0	U	5.0	0.37	ug/Kg			07/24/17 12:43	1
Toluene	5.0	U	5.0	0.34	ug/Kg			07/24/17 12:43	1
Trichloroethene	5.0	U	5.0	0.41	ug/Kg			07/24/17 12:43	1
Vinyl chloride	5.0	U	5.0	0.28	ug/Kg			07/24/17 12:43	1
Xylenes, Total	10	U	10	0.40	ug/Kg			07/24/17 12:43	1
1,1,1-Trichloroethane	5.0	U	5.0	0.23	ug/Kg			07/24/17 12:43	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			07/24/17 12:43	1
Cyclohexane	10	U	10	0.21	ug/Kg			07/24/17 12:43	1
1,2-Dibromo-3-Chloropropane	10	U	10	0.68	ug/Kg			07/24/17 12:43	1
Ethylene Dibromide	5.0	U	5.0	0.35	ug/Kg			07/24/17 12:43	1
Dichlorodifluoromethane	5.0	U	5.0	0.35	ug/Kg			07/24/17 12:43	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.28	ug/Kg			07/24/17 12:43	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.38	ug/Kg			07/24/17 12:43	1
Isopropylbenzene	5.0	U	5.0	0.20	ug/Kg			07/24/17 12:43	1
Methyl acetate	25	U	25	1.2	ug/Kg			07/24/17 12:43	1
Methyl tert-butyl ether	5.0	U	5.0	0.27	ug/Kg			07/24/17 12:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	0.49	ug/Kg			07/24/17 12:43	1
1,2,4-Trichlorobenzene	0.481	J	5.0	0.24	ug/Kg			07/24/17 12:43	1
1,2-Dichlorobenzene	0.231	J	5.0	0.22	ug/Kg			07/24/17 12:43	1
1,3-Dichlorobenzene	5.0	U	5.0	0.29	ug/Kg			07/24/17 12:43	1
1,4-Dichlorobenzene	5.0	U	5.0	0.35	ug/Kg			07/24/17 12:43	1
Trichlorofluoromethane	5.0	U	5.0	0.24	ug/Kg			07/24/17 12:43	1
Chlorodibromomethane	5.0	U	5.0	0.30	ug/Kg			07/24/17 12:43	1
Methylcyclohexane	10	U	10	0.23	ug/Kg			07/24/17 12:43	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288397/5
Matrix: Solid
Analysis Batch: 288397

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.649	J	5.0	0.33	ug/Kg			07/24/17 12:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		61 - 127		07/24/17 12:43	1
4-Bromofluorobenzene (Surr)	80		61 - 132		07/24/17 12:43	1
Toluene-d8 (Surr)	90		66 - 125		07/24/17 12:43	1
Dibromofluoromethane (Surr)	88		43 - 131		07/24/17 12:43	1

Lab Sample ID: LCS 240-288397/4
Matrix: Solid
Analysis Batch: 288397

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	86.7		ug/Kg		87	24 - 125
Benzene	50.0	43.4		ug/Kg		87	77 - 120
Dichlorobromomethane	50.0	46.8		ug/Kg		94	61 - 132
Bromoform	50.0	50.3		ug/Kg		101	40 - 140
Bromomethane	20.0	18.8		ug/Kg		94	10 - 153
2-Butanone (MEK)	100	109		ug/Kg		109	51 - 120
Carbon disulfide	50.0	44.1		ug/Kg		88	17 - 163
Carbon tetrachloride	50.0	46.7		ug/Kg		93	43 - 144
Chlorobenzene	50.0	42.6		ug/Kg		85	76 - 120
Chloroethane	20.0	15.6		ug/Kg		78	10 - 166
Chloroform	50.0	43.3		ug/Kg		87	74 - 120
Chloromethane	20.0	17.9		ug/Kg		90	41 - 124
1,1-Dichloroethane	50.0	43.2		ug/Kg		86	72 - 120
1,2-Dichloroethane	50.0	43.9		ug/Kg		88	71 - 120
1,1-Dichloroethene	50.0	46.6		ug/Kg		93	58 - 130
1,2-Dichloropropane	50.0	44.6		ug/Kg		89	78 - 122
cis-1,3-Dichloropropene	50.0	44.2		ug/Kg		88	66 - 126
trans-1,3-Dichloropropene	50.0	36.9		ug/Kg		74	55 - 121
Ethylbenzene	50.0	43.3		ug/Kg		87	76 - 120
2-Hexanone	100	100		ug/Kg		100	52 - 129
Methylene Chloride	50.0	41.7		ug/Kg		83	64 - 126
4-Methyl-2-pentanone (MIBK)	100	99.9		ug/Kg		100	65 - 131
Styrene	50.0	43.9		ug/Kg		88	80 - 120
1,1,2,2-Tetrachloroethane	50.0	44.8		ug/Kg		90	78 - 120
Tetrachloroethene	50.0	44.0		ug/Kg		88	68 - 122
Toluene	50.0	42.0		ug/Kg		84	74 - 120
Trichloroethene	50.0	45.8		ug/Kg		92	73 - 123
Vinyl chloride	20.0	17.1		ug/Kg		85	49 - 131
Xylenes, Total	100	88.3		ug/Kg		88	78 - 120
1,1,1-Trichloroethane	50.0	46.6		ug/Kg		93	60 - 136
1,1,2-Trichloroethane	50.0	44.7		ug/Kg		89	80 - 120
Cyclohexane	50.0	45.9		ug/Kg		92	66 - 129
1,2-Dibromo-3-Chloropropane	50.0	43.7		ug/Kg		87	40 - 133
Ethylene Dibromide	50.0	45.4		ug/Kg		91	80 - 120
Dichlorodifluoromethane	20.0	19.3		ug/Kg		97	15 - 127

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288397/4

Matrix: Solid

Analysis Batch: 288397

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	43.4		ug/Kg		87	78 - 120
trans-1,2-Dichloroethene	50.0	45.8		ug/Kg		92	74 - 124
Isopropylbenzene	50.0	45.9		ug/Kg		92	76 - 124
Methyl acetate	100	91.4		ug/Kg		91	63 - 126
Methyl tert-butyl ether	50.0	38.0		ug/Kg		76	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	46.1		ug/Kg		92	64 - 125
1,2,4-Trichlorobenzene	50.0	39.6		ug/Kg		79	60 - 124
1,2-Dichlorobenzene	50.0	41.0		ug/Kg		82	75 - 120
1,3-Dichlorobenzene	50.0	41.0		ug/Kg		82	72 - 120
1,4-Dichlorobenzene	50.0	41.0		ug/Kg		82	71 - 120
Trichlorofluoromethane	20.0	18.4		ug/Kg		92	28 - 152
Chlorodibromomethane	50.0	47.3		ug/Kg		95	46 - 125
Methylcyclohexane	50.0	44.4		ug/Kg		89	71 - 126
m-Xylene & p-Xylene	50.0	43.8		ug/Kg		88	78 - 120
o-Xylene	50.0	44.5		ug/Kg		89	77 - 120
Naphthalene	50.0	42.9		ug/Kg		86	68 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	82		61 - 127
4-Bromofluorobenzene (Surr)	82		61 - 132
Toluene-d8 (Surr)	92		66 - 125
Dibromofluoromethane (Surr)	92		43 - 131

QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

GC/MS VOA

Prep Batch: 288034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82505-1	S-170717-RA-01	Total/NA	Solid	5035	
240-82505-8	S-170718-RA-02	Total/NA	Solid	5035	
240-82505-9	S-170718-RA-03	Total/NA	Solid	5035	

Analysis Batch: 288159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82505-2	W-170717-RA-01	Total/NA	Water	8260B	
240-82505-3	W-170717-RA-02	Total/NA	Water	8260B	
240-82505-4	W-170717-RA-03	Total/NA	Water	8260B	
MB 240-288159/35	Method Blank	Total/NA	Water	8260B	
LCS 240-288159/4	Lab Control Sample	Total/NA	Water	8260B	
240-82505-4 MS	W-170717-RA-03	Total/NA	Water	8260B	
240-82505-4 MSD	W-170717-RA-03	Total/NA	Water	8260B	

Analysis Batch: 288161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82505-6	W-170717-RA-05	Total/NA	Water	8260B	
240-82505-7	W-170717-RA-06	Total/NA	Water	8260B	
240-82505-10	TRIP BLANK	Total/NA	Water	8260B	
MB 240-288161/6	Method Blank	Total/NA	Water	8260B	
LCS 240-288161/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 288165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82505-1	S-170717-RA-01	Total/NA	Solid	8260B	288034
240-82505-8	S-170718-RA-02	Total/NA	Solid	8260B	288034
MB 240-288165/5	Method Blank	Total/NA	Solid	8260B	
LCS 240-288165/4	Lab Control Sample	Total/NA	Solid	8260B	

Analysis Batch: 288349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82505-5	W-170717-RA-04	Total/NA	Water	8260B	
MB 240-288349/33	Method Blank	Total/NA	Water	8260B	
LCS 240-288349/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 288397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82505-9	S-170718-RA-03	Total/NA	Solid	8260B	288034
MB 240-288397/5	Method Blank	Total/NA	Solid	8260B	
LCS 240-288397/4	Lab Control Sample	Total/NA	Solid	8260B	

General Chemistry

Analysis Batch: 287794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82505-1	S-170717-RA-01	Total/NA	Solid	Moisture	
240-82505-8	S-170718-RA-02	Total/NA	Solid	Moisture	
240-82505-9	S-170718-RA-03	Total/NA	Solid	Moisture	

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: S-170717-RA-01

Date Collected: 07/17/17 11:00

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	287794	07/19/17 14:51	PW	TAL CAN

Client Sample ID: S-170717-RA-01

Date Collected: 07/17/17 11:00

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-1

Matrix: Solid

Percent Solids: 87.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			288034	07/19/17 10:20	LAM	TAL CAN
Total/NA	Analysis	8260B		1	288165	07/21/17 16:16	SAM	TAL CAN

Client Sample ID: W-170717-RA-01

Date Collected: 07/17/17 12:50

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	288159	07/21/17 18:47	LEE	TAL CAN

Client Sample ID: W-170717-RA-02

Date Collected: 07/17/17 13:20

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	288159	07/21/17 19:09	LEE	TAL CAN

Client Sample ID: W-170717-RA-03

Date Collected: 07/17/17 13:50

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		500	288159	07/21/17 19:32	LEE	TAL CAN

Client Sample ID: W-170717-RA-04

Date Collected: 07/17/17 15:20

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1000	288349	07/24/17 10:13	LEE	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: W-170717-RA-05

Date Collected: 07/17/17 15:10

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2500	288161	07/21/17 19:50	LEE	TAL CAN

Client Sample ID: W-170717-RA-06

Date Collected: 07/17/17 16:10

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2500	288161	07/21/17 20:12	LEE	TAL CAN

Client Sample ID: S-170718-RA-02

Date Collected: 07/18/17 14:40

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	287794	07/19/17 14:51	PW	TAL CAN

Client Sample ID: S-170718-RA-02

Date Collected: 07/18/17 14:40

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-8

Matrix: Solid

Percent Solids: 94.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			288034	07/19/17 10:20	LAM	TAL CAN
Total/NA	Analysis	8260B		1	288165	07/21/17 16:41	SAM	TAL CAN

Client Sample ID: S-170718-RA-03

Date Collected: 07/18/17 14:50

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	287794	07/19/17 14:51	PW	TAL CAN

Client Sample ID: S-170718-RA-03

Date Collected: 07/18/17 14:50

Date Received: 07/19/17 09:30

Lab Sample ID: 240-82505-9

Matrix: Solid

Percent Solids: 96.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			288034	07/19/17 10:20	LAM	TAL CAN
Total/NA	Analysis	8260B		1	288397	07/24/17 16:07	SAM	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82505-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82505-10

Date Collected: 07/17/17 00:00

Matrix: Water

Date Received: 07/19/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	288161	07/21/17 19:04	LEE	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

- 1
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- 11
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CONESTOGA-ROVERS & ASSOCIATES

07/017

CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States

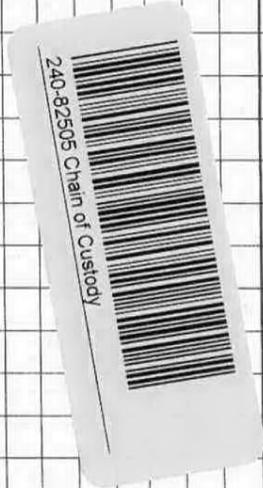
Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: **SP-02428**

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 88751-40				Laboratory Name: Test America				Lab Location:				SSOW ID:																									
Project Name: 6714 W-1Kerst				Lab Contact:				Lab Quote No:				Cooler No:																									
Project Location: SLP				CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)				Carrier:																									
Chemistry Contact: G. Anderson				<table border="1"> <thead> <tr> <th>SAMPLE TYPE</th> <th>Matrix Code (see back of COC)</th> <th>Grab (G) or Comp (C)</th> <th>Unpreserved</th> <th>Hydrochloric Acid (HCl)</th> <th>Nitric Acid (HNO₃)</th> <th>Sulfuric Acid (H₂SO₄)</th> <th>Sodium Hydroxide (NaOH)</th> <th>Methanol/Water (Soil VOC)</th> <th>EnCores 3x5-g, 1x25-g</th> <th>Other:</th> <th>Total Containers/Sample</th> <th rowspan="2">MS/MSD Request</th> </tr> </thead> <tbody> <tr> <td></td> <td>505</td> <td></td> </tr> </tbody> </table>				SAMPLE TYPE	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	MS/MSD Request												505		Airbill No:			
SAMPLE TYPE	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved					Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	MS/MSD Request																					
											505																										
Sampler(s): Rtamot												Date Shipped:																									
Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)		DATE (mm/dd/yy)	TIME (hh:mm)	Matrix Code	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	COMMENTS/ SPECIAL INSTRUCTIONS:																					
1	S-170717-RA-01		7/17/17	1100	SO	G		3							3																						
2	W-170717-RA-01			1250	WG	G		3							3																						
3	W-170717-RA-02			1320		G		3							3																						
4	W-170717-RA-03			1350		G		3							3																						
5	W-170717-RA-04			1520		G		3							3																						
6	W-170717-RA-05			1610		G		3							3																						
7	W-170717-RA-06			1016	✓	✓		3							3																						
8	S-170718-RA-02		7/18/17	1440	✓	✓		3							3																						
9	S-170718-RA-03		7/18/17	1450	✓	✓		3							3																						
10	trip blank																																				
11																																					
12																																					
13																																					
14																																					
15																																					
TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:							Total Number of Containers:			Notes/ Special Requirements:																											
All Samples in Cooler must be on COC																																					
RELINQUISHED BY		COMPANY		DATE		TIME		RECEIVED BY			COMPANY		DATE		TIME																						
1. [Signature]		CRA		7/18/17				1. POP			TAL		7-19-17		930																						
2.								2.																													
3.								3.																													



THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY



TestAmerica Canton Sample Receipt Form/Narrative

Login # : 72505

Canton Facility

Client CRA Site Name _____ Cooler unpacked by: POP

Cooler Received on 7-19-17 Opened on 7-19-17

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0 °C) Observed Cooler Temp. 0.7 °C Corrected Cooler Temp. 0.7 °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ (Yes No)
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
 If yes, Questions 11-15 have been checked at the originating laboratory.
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC697954
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA  Larger than this.
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B650301UB Yes No
15. Was a LL Hg or Me Hg trip blank present? Yes No
- Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
- Concerning _____

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

ALL H₂O voa vial received w/ Bubbles/headspace.

17. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

Ref: SOP NC-SC-0005, Sample Receiving
 \\tacorp\corp\QA\QA_Facilities\Canton-QA\Document-Management\Work-Instruction\Word Version Work Instructions\WI-NC-099-052317 Cooler Receipt Form.doc djf

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-82669-1

Client Project/Site: 88751, Hinshawn & Culbertson

Revision: 1

For:

GHD Services Inc.

1801 Old Highway 8 NW

Suite 114

St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson



Authorized for release by:

10/16/2017 10:36:30 AM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com

LINKS

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results through

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Job ID: 240-82669-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-82669-1

Comments

A revised COC was provided on October 13, 2017. The sample collection times were corrected at the request of GHD. A revised report was provided on October 16, 2017.

Receipt

The samples were received on 7/21/2017 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.1° C.

GC/MS VOA

Method(s) 8260B: The pH of the sample(s) was greater than 2. The samples were analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably, Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2: W-170719-RA-08 (240-82669-2), W-170719-RA-09 (240-82669-3), W-170719-RA-10 (240-82669-4), W-170719-RA-13 (240-82669-7), W-170719-RA-15 (240-82669-9), W-170719-RA-16 (240-82669-10), W-170719-RA-17 (240-82669-11) and W-170719-RA-18 (240-82669-12), W-170719-RA-11 (240-82669-5), W-170719-RA-12 (240-82669-6) and W-170719-RA-14 (240-82669-8).

Method(s) 8260B: There is no MS/MSD in batch 289459 due to an incorrect sample dilution. W-170719-RA-11 (240-82669-5), W-170719-RA-12 (240-82669-6) and W-170719-RA-14 (240-82669-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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Sample Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-82669-1	W-170719-RA-07	Water	07/19/17 08:15	07/21/17 09:20
240-82669-2	W-170719-RA-08	Water	07/19/17 09:10	07/21/17 09:20
240-82669-3	W-170719-RA-09	Water	07/19/17 10:20	07/21/17 09:20
240-82669-4	W-170719-RA-10	Water	07/19/17 10:20	07/21/17 09:20
240-82669-5	W-170719-RA-11	Water	07/19/17 11:00	07/21/17 09:20
240-82669-6	W-170719-RA-12	Water	07/19/17 12:55	07/21/17 09:20
240-82669-7	W-170719-RA-13	Water	07/19/17 08:30	07/21/17 09:20
240-82669-8	W-170719-RA-14	Water	07/19/17 08:50	07/21/17 09:20
240-82669-9	W-170719-RA-15	Water	07/19/17 10:00	07/21/17 09:20
240-82669-10	W-170719-RA-16	Water	07/19/17 10:50	07/21/17 09:20
240-82669-11	W-170719-RA-17	Water	07/19/17 12:50	07/21/17 09:20
240-82669-12	W-170719-RA-18	Water	07/19/17 13:50	07/21/17 09:20
240-82669-13	TRIP BLANK	Water	07/19/17 00:00	07/21/17 09:20

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-07

Lab Sample ID: 240-82669-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	18		1.0	0.33	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	10		1.0	0.30	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	23		1.0	0.29	ug/L	1		8260B	Total/NA

Client Sample ID: W-170719-RA-08

Lab Sample ID: 240-82669-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.9	J	3.3	0.93	ug/L	3.33		8260B	Total/NA
1,1-Dichloroethene	1.1	J	3.3	0.90	ug/L	3.33		8260B	Total/NA
Trichloroethene	7.6		3.3	1.1	ug/L	3.33		8260B	Total/NA
Vinyl chloride	4.0		3.3	1.5	ug/L	3.33		8260B	Total/NA
cis-1,2-Dichloroethene	83		3.3	1.0	ug/L	3.33		8260B	Total/NA
trans-1,2-Dichloroethene	43		3.3	0.97	ug/L	3.33		8260B	Total/NA

Client Sample ID: W-170719-RA-09

Lab Sample ID: 240-82669-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.6		5.0	1.4	ug/L	5		8260B	Total/NA
1,1-Dichloroethene	2.4	J	5.0	1.4	ug/L	5		8260B	Total/NA
Vinyl chloride	11		5.0	2.3	ug/L	5		8260B	Total/NA
cis-1,2-Dichloroethene	150		5.0	1.5	ug/L	5		8260B	Total/NA
trans-1,2-Dichloroethene	30		5.0	1.5	ug/L	5		8260B	Total/NA

Client Sample ID: W-170719-RA-10

Lab Sample ID: 240-82669-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.2		5.0	1.4	ug/L	5		8260B	Total/NA
1,1-Dichloroethene	2.3	J	5.0	1.4	ug/L	5		8260B	Total/NA
Vinyl chloride	10		5.0	2.3	ug/L	5		8260B	Total/NA
cis-1,2-Dichloroethene	140		5.0	1.5	ug/L	5		8260B	Total/NA
trans-1,2-Dichloroethene	29		5.0	1.5	ug/L	5		8260B	Total/NA

Client Sample ID: W-170719-RA-11

Lab Sample ID: 240-82669-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	38		2.0	0.56	ug/L	2		8260B	Total/NA
Ethylbenzene	9.9		2.0	0.52	ug/L	2		8260B	Total/NA
Tetrachloroethene	0.80	J	2.0	0.60	ug/L	2		8260B	Total/NA
Toluene	0.75	J	2.0	0.46	ug/L	2		8260B	Total/NA
Vinyl chloride	2.2		2.0	0.90	ug/L	2		8260B	Total/NA
Xylenes, Total	11		4.0	0.48	ug/L	2		8260B	Total/NA
trans-1,2-Dichloroethene	10		2.0	0.58	ug/L	2		8260B	Total/NA
Isopropylbenzene	2.4		2.0	0.42	ug/L	2		8260B	Total/NA
Naphthalene	21		2.0	0.50	ug/L	2		8260B	Total/NA

Client Sample ID: W-170719-RA-12

Lab Sample ID: 240-82669-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	13	J	20	3.5	ug/L	2		8260B	Total/NA
Benzene	48		2.0	0.56	ug/L	2		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-12 (Continued)

Lab Sample ID: 240-82669-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	12		2.0	0.52	ug/L	2		8260B	Total/NA
Toluene	0.70	J	2.0	0.46	ug/L	2		8260B	Total/NA
Vinyl chloride	5.0		2.0	0.90	ug/L	2		8260B	Total/NA
Xylenes, Total	11		4.0	0.48	ug/L	2		8260B	Total/NA
trans-1,2-Dichloroethene	21		2.0	0.58	ug/L	2		8260B	Total/NA
Isopropylbenzene	2.6		2.0	0.42	ug/L	2		8260B	Total/NA
Naphthalene	48		2.0	0.50	ug/L	2		8260B	Total/NA

Client Sample ID: W-170719-RA-13

Lab Sample ID: 240-82669-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	5700		200	60	ug/L	200		8260B	Total/NA
Naphthalene	1100		200	50	ug/L	200		8260B	Total/NA

Client Sample ID: W-170719-RA-14

Lab Sample ID: 240-82669-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	62000		2000	600	ug/L	2000		8260B	Total/NA
Naphthalene	1600	J	2000	500	ug/L	2000		8260B	Total/NA

Client Sample ID: W-170719-RA-15

Lab Sample ID: 240-82669-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	3100		140	43	ug/L	142.86		8260B	Total/NA

Client Sample ID: W-170719-RA-16

Lab Sample ID: 240-82669-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.2	J	10	1.8	ug/L	1		8260B	Total/NA

Client Sample ID: W-170719-RA-17

Lab Sample ID: 240-82669-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	610		20	6.0	ug/L	20		8260B	Total/NA
Trichloroethene	71		20	6.6	ug/L	20		8260B	Total/NA
cis-1,2-Dichloroethene	86		20	6.0	ug/L	20		8260B	Total/NA
trans-1,2-Dichloroethene	14	J	20	5.8	ug/L	20		8260B	Total/NA

Client Sample ID: W-170719-RA-18

Lab Sample ID: 240-82669-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	82	J	200	35	ug/L	20		8260B	Total/NA
Benzene	15	J	20	5.6	ug/L	20		8260B	Total/NA
Tetrachloroethene	660		20	6.0	ug/L	20		8260B	Total/NA
Trichloroethene	21		20	6.6	ug/L	20		8260B	Total/NA
Vinyl chloride	25		20	9.0	ug/L	20		8260B	Total/NA
cis-1,2-Dichloroethene	25		20	6.0	ug/L	20		8260B	Total/NA
trans-1,2-Dichloroethene	8.4	J	20	5.8	ug/L	20		8260B	Total/NA
Naphthalene	6.7	J	20	5.0	ug/L	20		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82669-13

No Detections.

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This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-07

Lab Sample ID: 240-82669-1

Date Collected: 07/19/17 08:15

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			07/31/17 17:02	1
Benzene	1.0	U	1.0	0.28	ug/L			07/31/17 17:02	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			07/31/17 17:02	1
Bromoform	1.0	U	1.0	0.43	ug/L			07/31/17 17:02	1
Bromomethane	1.0	U	1.0	0.42	ug/L			07/31/17 17:02	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			07/31/17 17:02	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			07/31/17 17:02	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			07/31/17 17:02	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			07/31/17 17:02	1
Chloroethane	1.0	U	1.0	0.41	ug/L			07/31/17 17:02	1
Chloroform	1.0	U	1.0	0.31	ug/L			07/31/17 17:02	1
Chloromethane	1.0	U	1.0	0.43	ug/L			07/31/17 17:02	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			07/31/17 17:02	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			07/31/17 17:02	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			07/31/17 17:02	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			07/31/17 17:02	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			07/31/17 17:02	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			07/31/17 17:02	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			07/31/17 17:02	1
2-Hexanone	10	U	10	1.2	ug/L			07/31/17 17:02	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			07/31/17 17:02	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			07/31/17 17:02	1
Styrene	1.0	U	1.0	0.23	ug/L			07/31/17 17:02	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			07/31/17 17:02	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			07/31/17 17:02	1
Toluene	1.0	U	1.0	0.23	ug/L			07/31/17 17:02	1
Trichloroethene	18		1.0	0.33	ug/L			07/31/17 17:02	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/31/17 17:02	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			07/31/17 17:02	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/31/17 17:02	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			07/31/17 17:02	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			07/31/17 17:02	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			07/31/17 17:02	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			07/31/17 17:02	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			07/31/17 17:02	1
cis-1,2-Dichloroethene	10		1.0	0.30	ug/L			07/31/17 17:02	1
trans-1,2-Dichloroethene	23		1.0	0.29	ug/L			07/31/17 17:02	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			07/31/17 17:02	1
Methyl acetate	10	U	10	1.4	ug/L			07/31/17 17:02	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			07/31/17 17:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			07/31/17 17:02	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			07/31/17 17:02	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			07/31/17 17:02	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			07/31/17 17:02	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			07/31/17 17:02	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			07/31/17 17:02	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			07/31/17 17:02	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			07/31/17 17:02	1
Naphthalene	1.0	U	1.0	0.25	ug/L			07/31/17 17:02	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-07
Date Collected: 07/19/17 08:15
Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-1
Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	84		61 - 138		07/31/17 17:02	1
4-Bromofluorobenzene (Surr)	92		69 - 120		07/31/17 17:02	1
Toluene-d8 (Surr)	87		73 - 120		07/31/17 17:02	1
Dibromofluoromethane (Surr)	85		69 - 124		07/31/17 17:02	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-08

Lab Sample ID: 240-82669-2

Date Collected: 07/19/17 09:10

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	33	U	33	5.9	ug/L			07/31/17 17:24	3.33
Benzene	2.9	J	3.3	0.93	ug/L			07/31/17 17:24	3.33
Dichlorobromomethane	3.3	U	3.3	1.0	ug/L			07/31/17 17:24	3.33
Bromoform	3.3	U	3.3	1.4	ug/L			07/31/17 17:24	3.33
Bromomethane	3.3	U	3.3	1.4	ug/L			07/31/17 17:24	3.33
2-Butanone (MEK)	33	U	33	3.4	ug/L			07/31/17 17:24	3.33
Carbon disulfide	3.3	U	3.3	1.1	ug/L			07/31/17 17:24	3.33
Carbon tetrachloride	3.3	U	3.3	1.2	ug/L			07/31/17 17:24	3.33
Chlorobenzene	3.3	U	3.3	1.1	ug/L			07/31/17 17:24	3.33
Chloroethane	3.3	U	3.3	1.4	ug/L			07/31/17 17:24	3.33
Chloroform	3.3	U	3.3	1.0	ug/L			07/31/17 17:24	3.33
Chloromethane	3.3	U	3.3	1.4	ug/L			07/31/17 17:24	3.33
1,1-Dichloroethane	3.3	U	3.3	0.83	ug/L			07/31/17 17:24	3.33
1,2-Dichloroethane	3.3	U	3.3	1.0	ug/L			07/31/17 17:24	3.33
1,1-Dichloroethene	1.1	J	3.3	0.90	ug/L			07/31/17 17:24	3.33
1,2-Dichloropropane	3.3	U	3.3	1.0	ug/L			07/31/17 17:24	3.33
cis-1,3-Dichloropropene	3.3	U	3.3	0.87	ug/L			07/31/17 17:24	3.33
trans-1,3-Dichloropropene	3.3	U	3.3	1.0	ug/L			07/31/17 17:24	3.33
Ethylbenzene	3.3	U	3.3	0.87	ug/L			07/31/17 17:24	3.33
2-Hexanone	33	U	33	4.1	ug/L			07/31/17 17:24	3.33
Methylene Chloride	3.3	U	3.3	1.8	ug/L			07/31/17 17:24	3.33
4-Methyl-2-pentanone (MIBK)	33	U	33	2.4	ug/L			07/31/17 17:24	3.33
Styrene	3.3	U	3.3	0.77	ug/L			07/31/17 17:24	3.33
1,1,2,2-Tetrachloroethane	3.3	U	3.3	1.1	ug/L			07/31/17 17:24	3.33
Tetrachloroethene	3.3	U	3.3	1.0	ug/L			07/31/17 17:24	3.33
Toluene	3.3	U	3.3	0.77	ug/L			07/31/17 17:24	3.33
Trichloroethene	7.6		3.3	1.1	ug/L			07/31/17 17:24	3.33
Vinyl chloride	4.0		3.3	1.5	ug/L			07/31/17 17:24	3.33
Xylenes, Total	6.7	U	6.7	0.80	ug/L			07/31/17 17:24	3.33
1,1,1-Trichloroethane	3.3	U	3.3	0.77	ug/L			07/31/17 17:24	3.33
1,1,2-Trichloroethane	3.3	U	3.3	1.1	ug/L			07/31/17 17:24	3.33
Cyclohexane	3.3	U	3.3	1.5	ug/L			07/31/17 17:24	3.33
1,2-Dibromo-3-Chloropropane	6.7	U	6.7	1.6	ug/L			07/31/17 17:24	3.33
Ethylene Dibromide	3.3	U	3.3	0.77	ug/L			07/31/17 17:24	3.33
Dichlorodifluoromethane	3.3	U	3.3	1.7	ug/L			07/31/17 17:24	3.33
cis-1,2-Dichloroethene	83		3.3	1.0	ug/L			07/31/17 17:24	3.33
trans-1,2-Dichloroethene	43		3.3	0.97	ug/L			07/31/17 17:24	3.33
Isopropylbenzene	3.3	U	3.3	0.70	ug/L			07/31/17 17:24	3.33
Methyl acetate	33	U	33	4.8	ug/L			07/31/17 17:24	3.33
Methyl tert-butyl ether	3.3	U	3.3	0.90	ug/L			07/31/17 17:24	3.33
1,1,2-Trichloro-1,2,2-trifluoroethane	3.3	U	3.3	1.4	ug/L			07/31/17 17:24	3.33
1,2,4-Trichlorobenzene	3.3	U	3.3	0.90	ug/L			07/31/17 17:24	3.33
1,2-Dichlorobenzene	3.3	U	3.3	0.87	ug/L			07/31/17 17:24	3.33
1,3-Dichlorobenzene	3.3	U	3.3	1.1	ug/L			07/31/17 17:24	3.33
1,4-Dichlorobenzene	3.3	U	3.3	0.77	ug/L			07/31/17 17:24	3.33
Trichlorofluoromethane	3.3	U	3.3	1.7	ug/L			07/31/17 17:24	3.33
Chlorodibromomethane	3.3	U	3.3	0.83	ug/L			07/31/17 17:24	3.33
Methylcyclohexane	3.3	U	3.3	1.5	ug/L			07/31/17 17:24	3.33
Naphthalene	3.3	U	3.3	0.83	ug/L			07/31/17 17:24	3.33

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-08
Date Collected: 07/19/17 09:10
Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-2
Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	83		61 - 138		07/31/17 17:24	3.33
4-Bromofluorobenzene (Surr)	91		69 - 120		07/31/17 17:24	3.33
Toluene-d8 (Surr)	87		73 - 120		07/31/17 17:24	3.33
Dibromofluoromethane (Surr)	84		69 - 124		07/31/17 17:24	3.33

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-09

Lab Sample ID: 240-82669-3

Date Collected: 07/19/17 10:20

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	50	U	50	8.8	ug/L			07/31/17 17:46	5
Benzene	6.6		5.0	1.4	ug/L			07/31/17 17:46	5
Dichlorobromomethane	5.0	U	5.0	1.5	ug/L			07/31/17 17:46	5
Bromoform	5.0	U	5.0	2.2	ug/L			07/31/17 17:46	5
Bromomethane	5.0	U	5.0	2.1	ug/L			07/31/17 17:46	5
2-Butanone (MEK)	50	U	50	5.1	ug/L			07/31/17 17:46	5
Carbon disulfide	5.0	U	5.0	1.7	ug/L			07/31/17 17:46	5
Carbon tetrachloride	5.0	U	5.0	1.8	ug/L			07/31/17 17:46	5
Chlorobenzene	5.0	U	5.0	1.6	ug/L			07/31/17 17:46	5
Chloroethane	5.0	U	5.0	2.1	ug/L			07/31/17 17:46	5
Chloroform	5.0	U	5.0	1.6	ug/L			07/31/17 17:46	5
Chloromethane	5.0	U	5.0	2.2	ug/L			07/31/17 17:46	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			07/31/17 17:46	5
1,2-Dichloroethane	5.0	U	5.0	1.5	ug/L			07/31/17 17:46	5
1,1-Dichloroethene	2.4	J	5.0	1.4	ug/L			07/31/17 17:46	5
1,2-Dichloropropane	5.0	U	5.0	1.5	ug/L			07/31/17 17:46	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.3	ug/L			07/31/17 17:46	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.6	ug/L			07/31/17 17:46	5
Ethylbenzene	5.0	U	5.0	1.3	ug/L			07/31/17 17:46	5
2-Hexanone	50	U	50	6.2	ug/L			07/31/17 17:46	5
Methylene Chloride	5.0	U	5.0	2.7	ug/L			07/31/17 17:46	5
4-Methyl-2-pentanone (MIBK)	50	U	50	3.6	ug/L			07/31/17 17:46	5
Styrene	5.0	U	5.0	1.2	ug/L			07/31/17 17:46	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.6	ug/L			07/31/17 17:46	5
Tetrachloroethene	5.0	U	5.0	1.5	ug/L			07/31/17 17:46	5
Toluene	5.0	U	5.0	1.2	ug/L			07/31/17 17:46	5
Trichloroethene	5.0	U	5.0	1.7	ug/L			07/31/17 17:46	5
Vinyl chloride	11		5.0	2.3	ug/L			07/31/17 17:46	5
Xylenes, Total	10	U	10	1.2	ug/L			07/31/17 17:46	5
1,1,1-Trichloroethane	5.0	U	5.0	1.2	ug/L			07/31/17 17:46	5
1,1,2-Trichloroethane	5.0	U	5.0	1.7	ug/L			07/31/17 17:46	5
Cyclohexane	5.0	U	5.0	2.2	ug/L			07/31/17 17:46	5
1,2-Dibromo-3-Chloropropane	10	U	10	2.4	ug/L			07/31/17 17:46	5
Ethylene Dibromide	5.0	U	5.0	1.2	ug/L			07/31/17 17:46	5
Dichlorodifluoromethane	5.0	U	5.0	2.5	ug/L			07/31/17 17:46	5
cis-1,2-Dichloroethene	150		5.0	1.5	ug/L			07/31/17 17:46	5
trans-1,2-Dichloroethene	30		5.0	1.5	ug/L			07/31/17 17:46	5
Isopropylbenzene	5.0	U	5.0	1.1	ug/L			07/31/17 17:46	5
Methyl acetate	50	U	50	7.2	ug/L			07/31/17 17:46	5
Methyl tert-butyl ether	5.0	U	5.0	1.4	ug/L			07/31/17 17:46	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	2.1	ug/L			07/31/17 17:46	5
1,2,4-Trichlorobenzene	5.0	U	5.0	1.4	ug/L			07/31/17 17:46	5
1,2-Dichlorobenzene	5.0	U	5.0	1.3	ug/L			07/31/17 17:46	5
1,3-Dichlorobenzene	5.0	U	5.0	1.6	ug/L			07/31/17 17:46	5
1,4-Dichlorobenzene	5.0	U	5.0	1.2	ug/L			07/31/17 17:46	5
Trichlorofluoromethane	5.0	U	5.0	2.5	ug/L			07/31/17 17:46	5
Chlorodibromomethane	5.0	U	5.0	1.3	ug/L			07/31/17 17:46	5
Methylcyclohexane	5.0	U	5.0	2.3	ug/L			07/31/17 17:46	5
Naphthalene	5.0	U	5.0	1.3	ug/L			07/31/17 17:46	5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-09
Date Collected: 07/19/17 10:20
Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-3
Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	84		61 - 138		07/31/17 17:46	5
4-Bromofluorobenzene (Surr)	92		69 - 120		07/31/17 17:46	5
Toluene-d8 (Surr)	88		73 - 120		07/31/17 17:46	5
Dibromofluoromethane (Surr)	85		69 - 124		07/31/17 17:46	5

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-10

Lab Sample ID: 240-82669-4

Date Collected: 07/19/17 10:20

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	50	U	50	8.8	ug/L			07/31/17 18:08	5
Benzene	6.2		5.0	1.4	ug/L			07/31/17 18:08	5
Dichlorobromomethane	5.0	U	5.0	1.5	ug/L			07/31/17 18:08	5
Bromoform	5.0	U	5.0	2.2	ug/L			07/31/17 18:08	5
Bromomethane	5.0	U	5.0	2.1	ug/L			07/31/17 18:08	5
2-Butanone (MEK)	50	U	50	5.1	ug/L			07/31/17 18:08	5
Carbon disulfide	5.0	U	5.0	1.7	ug/L			07/31/17 18:08	5
Carbon tetrachloride	5.0	U	5.0	1.8	ug/L			07/31/17 18:08	5
Chlorobenzene	5.0	U	5.0	1.6	ug/L			07/31/17 18:08	5
Chloroethane	5.0	U	5.0	2.1	ug/L			07/31/17 18:08	5
Chloroform	5.0	U	5.0	1.6	ug/L			07/31/17 18:08	5
Chloromethane	5.0	U	5.0	2.2	ug/L			07/31/17 18:08	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			07/31/17 18:08	5
1,2-Dichloroethane	5.0	U	5.0	1.5	ug/L			07/31/17 18:08	5
1,1-Dichloroethene	2.3	J	5.0	1.4	ug/L			07/31/17 18:08	5
1,2-Dichloropropane	5.0	U	5.0	1.5	ug/L			07/31/17 18:08	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.3	ug/L			07/31/17 18:08	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.6	ug/L			07/31/17 18:08	5
Ethylbenzene	5.0	U	5.0	1.3	ug/L			07/31/17 18:08	5
2-Hexanone	50	U	50	6.2	ug/L			07/31/17 18:08	5
Methylene Chloride	5.0	U	5.0	2.7	ug/L			07/31/17 18:08	5
4-Methyl-2-pentanone (MIBK)	50	U	50	3.6	ug/L			07/31/17 18:08	5
Styrene	5.0	U	5.0	1.2	ug/L			07/31/17 18:08	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.6	ug/L			07/31/17 18:08	5
Tetrachloroethene	5.0	U	5.0	1.5	ug/L			07/31/17 18:08	5
Toluene	5.0	U	5.0	1.2	ug/L			07/31/17 18:08	5
Trichloroethene	5.0	U	5.0	1.7	ug/L			07/31/17 18:08	5
Vinyl chloride	10		5.0	2.3	ug/L			07/31/17 18:08	5
Xylenes, Total	10	U	10	1.2	ug/L			07/31/17 18:08	5
1,1,1-Trichloroethane	5.0	U	5.0	1.2	ug/L			07/31/17 18:08	5
1,1,2-Trichloroethane	5.0	U	5.0	1.7	ug/L			07/31/17 18:08	5
Cyclohexane	5.0	U	5.0	2.2	ug/L			07/31/17 18:08	5
1,2-Dibromo-3-Chloropropane	10	U	10	2.4	ug/L			07/31/17 18:08	5
Ethylene Dibromide	5.0	U	5.0	1.2	ug/L			07/31/17 18:08	5
Dichlorodifluoromethane	5.0	U	5.0	2.5	ug/L			07/31/17 18:08	5
cis-1,2-Dichloroethene	140		5.0	1.5	ug/L			07/31/17 18:08	5
trans-1,2-Dichloroethene	29		5.0	1.5	ug/L			07/31/17 18:08	5
Isopropylbenzene	5.0	U	5.0	1.1	ug/L			07/31/17 18:08	5
Methyl acetate	50	U	50	7.2	ug/L			07/31/17 18:08	5
Methyl tert-butyl ether	5.0	U	5.0	1.4	ug/L			07/31/17 18:08	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	2.1	ug/L			07/31/17 18:08	5
1,2,4-Trichlorobenzene	5.0	U	5.0	1.4	ug/L			07/31/17 18:08	5
1,2-Dichlorobenzene	5.0	U	5.0	1.3	ug/L			07/31/17 18:08	5
1,3-Dichlorobenzene	5.0	U	5.0	1.6	ug/L			07/31/17 18:08	5
1,4-Dichlorobenzene	5.0	U	5.0	1.2	ug/L			07/31/17 18:08	5
Trichlorofluoromethane	5.0	U	5.0	2.5	ug/L			07/31/17 18:08	5
Chlorodibromomethane	5.0	U	5.0	1.3	ug/L			07/31/17 18:08	5
Methylcyclohexane	5.0	U	5.0	2.3	ug/L			07/31/17 18:08	5
Naphthalene	5.0	U	5.0	1.3	ug/L			07/31/17 18:08	5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-10

Date Collected: 07/19/17 10:20

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-4

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	83		61 - 138		07/31/17 18:08	5
4-Bromofluorobenzene (Surr)	92		69 - 120		07/31/17 18:08	5
Toluene-d8 (Surr)	88		73 - 120		07/31/17 18:08	5
Dibromofluoromethane (Surr)	84		69 - 124		07/31/17 18:08	5

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-11

Lab Sample ID: 240-82669-5

Date Collected: 07/19/17 11:00

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20	U	20	3.5	ug/L			08/01/17 14:04	2
Benzene	38		2.0	0.56	ug/L			08/01/17 14:04	2
Dichlorobromomethane	2.0	U	2.0	0.60	ug/L			08/01/17 14:04	2
Bromoform	2.0	U	2.0	0.86	ug/L			08/01/17 14:04	2
Bromomethane	2.0	U	2.0	0.84	ug/L			08/01/17 14:04	2
2-Butanone (MEK)	20	U	20	2.0	ug/L			08/01/17 14:04	2
Carbon disulfide	2.0	U	2.0	0.68	ug/L			08/01/17 14:04	2
Carbon tetrachloride	2.0	U	2.0	0.70	ug/L			08/01/17 14:04	2
Chlorobenzene	2.0	U	2.0	0.64	ug/L			08/01/17 14:04	2
Chloroethane	2.0	U	2.0	0.82	ug/L			08/01/17 14:04	2
Chloroform	2.0	U	2.0	0.62	ug/L			08/01/17 14:04	2
Chloromethane	2.0	U	2.0	0.86	ug/L			08/01/17 14:04	2
1,1-Dichloroethane	2.0	U	2.0	0.50	ug/L			08/01/17 14:04	2
1,2-Dichloroethane	2.0	U	2.0	0.60	ug/L			08/01/17 14:04	2
1,1-Dichloroethene	2.0	U	2.0	0.54	ug/L			08/01/17 14:04	2
1,2-Dichloropropane	2.0	U	2.0	0.60	ug/L			08/01/17 14:04	2
cis-1,3-Dichloropropene	2.0	U	2.0	0.52	ug/L			08/01/17 14:04	2
trans-1,3-Dichloropropene	2.0	U	2.0	0.62	ug/L			08/01/17 14:04	2
Ethylbenzene	9.9		2.0	0.52	ug/L			08/01/17 14:04	2
2-Hexanone	20	U	20	2.5	ug/L			08/01/17 14:04	2
Methylene Chloride	2.0	U	2.0	1.1	ug/L			08/01/17 14:04	2
4-Methyl-2-pentanone (MIBK)	20	U	20	1.4	ug/L			08/01/17 14:04	2
Styrene	2.0	U	2.0	0.46	ug/L			08/01/17 14:04	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.64	ug/L			08/01/17 14:04	2
Tetrachloroethene	0.80	J	2.0	0.60	ug/L			08/01/17 14:04	2
Toluene	0.75	J	2.0	0.46	ug/L			08/01/17 14:04	2
Trichloroethene	2.0	U	2.0	0.66	ug/L			08/01/17 14:04	2
Vinyl chloride	2.2		2.0	0.90	ug/L			08/01/17 14:04	2
Xylenes, Total	11		4.0	0.48	ug/L			08/01/17 14:04	2
1,1,1-Trichloroethane	2.0	U	2.0	0.46	ug/L			08/01/17 14:04	2
1,1,2-Trichloroethane	2.0	U	2.0	0.68	ug/L			08/01/17 14:04	2
Cyclohexane	2.0	U	2.0	0.88	ug/L			08/01/17 14:04	2
1,2-Dibromo-3-Chloropropane	4.0	U	4.0	0.94	ug/L			08/01/17 14:04	2
Ethylene Dibromide	2.0	U	2.0	0.46	ug/L			08/01/17 14:04	2
Dichlorodifluoromethane	2.0	U	2.0	1.0	ug/L			08/01/17 14:04	2
cis-1,2-Dichloroethene	2.0	U	2.0	0.60	ug/L			08/01/17 14:04	2
trans-1,2-Dichloroethene	10		2.0	0.58	ug/L			08/01/17 14:04	2
Isopropylbenzene	2.4		2.0	0.42	ug/L			08/01/17 14:04	2
Methyl acetate	20	U	20	2.9	ug/L			08/01/17 14:04	2
Methyl tert-butyl ether	2.0	U	2.0	0.54	ug/L			08/01/17 14:04	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0	0.82	ug/L			08/01/17 14:04	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.54	ug/L			08/01/17 14:04	2
1,2-Dichlorobenzene	2.0	U	2.0	0.52	ug/L			08/01/17 14:04	2
1,3-Dichlorobenzene	2.0	U	2.0	0.64	ug/L			08/01/17 14:04	2
1,4-Dichlorobenzene	2.0	U	2.0	0.46	ug/L			08/01/17 14:04	2
Trichlorofluoromethane	2.0	U	2.0	1.0	ug/L			08/01/17 14:04	2
Chlorodibromomethane	2.0	U	2.0	0.50	ug/L			08/01/17 14:04	2
Methylcyclohexane	2.0	U	2.0	0.90	ug/L			08/01/17 14:04	2
Naphthalene	21		2.0	0.50	ug/L			08/01/17 14:04	2

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-11
Date Collected: 07/19/17 11:00
Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-5
Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	81		61 - 138		08/01/17 14:04	2
4-Bromofluorobenzene (Surr)	93		69 - 120		08/01/17 14:04	2
Toluene-d8 (Surr)	92		73 - 120		08/01/17 14:04	2
Dibromofluoromethane (Surr)	86		69 - 124		08/01/17 14:04	2

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-12

Lab Sample ID: 240-82669-6

Date Collected: 07/19/17 12:55

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	13	J	20	3.5	ug/L			08/01/17 14:27	2
Benzene	48		2.0	0.56	ug/L			08/01/17 14:27	2
Dichlorobromomethane	2.0	U	2.0	0.60	ug/L			08/01/17 14:27	2
Bromoform	2.0	U	2.0	0.86	ug/L			08/01/17 14:27	2
Bromomethane	2.0	U	2.0	0.84	ug/L			08/01/17 14:27	2
2-Butanone (MEK)	20	U	20	2.0	ug/L			08/01/17 14:27	2
Carbon disulfide	2.0	U	2.0	0.68	ug/L			08/01/17 14:27	2
Carbon tetrachloride	2.0	U	2.0	0.70	ug/L			08/01/17 14:27	2
Chlorobenzene	2.0	U	2.0	0.64	ug/L			08/01/17 14:27	2
Chloroethane	2.0	U	2.0	0.82	ug/L			08/01/17 14:27	2
Chloroform	2.0	U	2.0	0.62	ug/L			08/01/17 14:27	2
Chloromethane	2.0	U	2.0	0.86	ug/L			08/01/17 14:27	2
1,1-Dichloroethane	2.0	U	2.0	0.50	ug/L			08/01/17 14:27	2
1,2-Dichloroethane	2.0	U	2.0	0.60	ug/L			08/01/17 14:27	2
1,1-Dichloroethene	2.0	U	2.0	0.54	ug/L			08/01/17 14:27	2
1,2-Dichloropropane	2.0	U	2.0	0.60	ug/L			08/01/17 14:27	2
cis-1,3-Dichloropropene	2.0	U	2.0	0.52	ug/L			08/01/17 14:27	2
trans-1,3-Dichloropropene	2.0	U	2.0	0.62	ug/L			08/01/17 14:27	2
Ethylbenzene	12		2.0	0.52	ug/L			08/01/17 14:27	2
2-Hexanone	20	U	20	2.5	ug/L			08/01/17 14:27	2
Methylene Chloride	2.0	U	2.0	1.1	ug/L			08/01/17 14:27	2
4-Methyl-2-pentanone (MIBK)	20	U	20	1.4	ug/L			08/01/17 14:27	2
Styrene	2.0	U	2.0	0.46	ug/L			08/01/17 14:27	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.64	ug/L			08/01/17 14:27	2
Tetrachloroethene	2.0	U	2.0	0.60	ug/L			08/01/17 14:27	2
Toluene	0.70	J	2.0	0.46	ug/L			08/01/17 14:27	2
Trichloroethene	2.0	U	2.0	0.66	ug/L			08/01/17 14:27	2
Vinyl chloride	5.0		2.0	0.90	ug/L			08/01/17 14:27	2
Xylenes, Total	11		4.0	0.48	ug/L			08/01/17 14:27	2
1,1,1-Trichloroethane	2.0	U	2.0	0.46	ug/L			08/01/17 14:27	2
1,1,2-Trichloroethane	2.0	U	2.0	0.68	ug/L			08/01/17 14:27	2
Cyclohexane	2.0	U	2.0	0.88	ug/L			08/01/17 14:27	2
1,2-Dibromo-3-Chloropropane	4.0	U	4.0	0.94	ug/L			08/01/17 14:27	2
Ethylene Dibromide	2.0	U	2.0	0.46	ug/L			08/01/17 14:27	2
Dichlorodifluoromethane	2.0	U	2.0	1.0	ug/L			08/01/17 14:27	2
cis-1,2-Dichloroethene	2.0	U	2.0	0.60	ug/L			08/01/17 14:27	2
trans-1,2-Dichloroethene	21		2.0	0.58	ug/L			08/01/17 14:27	2
Isopropylbenzene	2.6		2.0	0.42	ug/L			08/01/17 14:27	2
Methyl acetate	20	U	20	2.9	ug/L			08/01/17 14:27	2
Methyl tert-butyl ether	2.0	U	2.0	0.54	ug/L			08/01/17 14:27	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0	0.82	ug/L			08/01/17 14:27	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.54	ug/L			08/01/17 14:27	2
1,2-Dichlorobenzene	2.0	U	2.0	0.52	ug/L			08/01/17 14:27	2
1,3-Dichlorobenzene	2.0	U	2.0	0.64	ug/L			08/01/17 14:27	2
1,4-Dichlorobenzene	2.0	U	2.0	0.46	ug/L			08/01/17 14:27	2
Trichlorofluoromethane	2.0	U	2.0	1.0	ug/L			08/01/17 14:27	2
Chlorodibromomethane	2.0	U	2.0	0.50	ug/L			08/01/17 14:27	2
Methylcyclohexane	2.0	U	2.0	0.90	ug/L			08/01/17 14:27	2
Naphthalene	48		2.0	0.50	ug/L			08/01/17 14:27	2

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-12

Lab Sample ID: 240-82669-6

Date Collected: 07/19/17 12:55

Matrix: Water

Date Received: 07/21/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	85		61 - 138		08/01/17 14:27	2
4-Bromofluorobenzene (Surr)	93		69 - 120		08/01/17 14:27	2
Toluene-d8 (Surr)	85		73 - 120		08/01/17 14:27	2
Dibromofluoromethane (Surr)	85		69 - 124		08/01/17 14:27	2

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-13

Lab Sample ID: 240-82669-7

Date Collected: 07/19/17 08:30

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2000	U	2000	350	ug/L			07/31/17 19:15	200
Benzene	200	U	200	56	ug/L			07/31/17 19:15	200
Dichlorobromomethane	200	U	200	60	ug/L			07/31/17 19:15	200
Bromoform	200	U	200	86	ug/L			07/31/17 19:15	200
Bromomethane	200	U	200	84	ug/L			07/31/17 19:15	200
2-Butanone (MEK)	2000	U	2000	200	ug/L			07/31/17 19:15	200
Carbon disulfide	200	U	200	68	ug/L			07/31/17 19:15	200
Carbon tetrachloride	200	U	200	70	ug/L			07/31/17 19:15	200
Chlorobenzene	200	U	200	64	ug/L			07/31/17 19:15	200
Chloroethane	200	U	200	82	ug/L			07/31/17 19:15	200
Chloroform	200	U	200	62	ug/L			07/31/17 19:15	200
Chloromethane	200	U	200	86	ug/L			07/31/17 19:15	200
1,1-Dichloroethane	200	U	200	50	ug/L			07/31/17 19:15	200
1,2-Dichloroethane	200	U	200	60	ug/L			07/31/17 19:15	200
1,1-Dichloroethene	200	U	200	54	ug/L			07/31/17 19:15	200
1,2-Dichloropropane	200	U	200	60	ug/L			07/31/17 19:15	200
cis-1,3-Dichloropropene	200	U	200	52	ug/L			07/31/17 19:15	200
trans-1,3-Dichloropropene	200	U	200	62	ug/L			07/31/17 19:15	200
Ethylbenzene	200	U	200	52	ug/L			07/31/17 19:15	200
2-Hexanone	2000	U	2000	250	ug/L			07/31/17 19:15	200
Methylene Chloride	200	U	200	110	ug/L			07/31/17 19:15	200
4-Methyl-2-pentanone (MIBK)	2000	U	2000	140	ug/L			07/31/17 19:15	200
Styrene	200	U	200	46	ug/L			07/31/17 19:15	200
1,1,2,2-Tetrachloroethane	200	U	200	64	ug/L			07/31/17 19:15	200
Tetrachloroethene	5700		200	60	ug/L			07/31/17 19:15	200
Toluene	200	U	200	46	ug/L			07/31/17 19:15	200
Trichloroethene	200	U	200	66	ug/L			07/31/17 19:15	200
Vinyl chloride	200	U	200	90	ug/L			07/31/17 19:15	200
Xylenes, Total	400	U	400	48	ug/L			07/31/17 19:15	200
1,1,1-Trichloroethane	200	U	200	46	ug/L			07/31/17 19:15	200
1,1,2-Trichloroethane	200	U	200	68	ug/L			07/31/17 19:15	200
Cyclohexane	200	U	200	88	ug/L			07/31/17 19:15	200
1,2-Dibromo-3-Chloropropane	400	U	400	94	ug/L			07/31/17 19:15	200
Ethylene Dibromide	200	U	200	46	ug/L			07/31/17 19:15	200
Dichlorodifluoromethane	200	U	200	100	ug/L			07/31/17 19:15	200
cis-1,2-Dichloroethene	200	U	200	60	ug/L			07/31/17 19:15	200
trans-1,2-Dichloroethene	200	U	200	58	ug/L			07/31/17 19:15	200
Isopropylbenzene	200	U	200	42	ug/L			07/31/17 19:15	200
Methyl acetate	2000	U	2000	290	ug/L			07/31/17 19:15	200
Methyl tert-butyl ether	200	U	200	54	ug/L			07/31/17 19:15	200
1,1,2-Trichloro-1,2,2-trifluoroethane	200	U	200	82	ug/L			07/31/17 19:15	200
1,2,4-Trichlorobenzene	200	U	200	54	ug/L			07/31/17 19:15	200
1,2-Dichlorobenzene	200	U	200	52	ug/L			07/31/17 19:15	200
1,3-Dichlorobenzene	200	U	200	64	ug/L			07/31/17 19:15	200
1,4-Dichlorobenzene	200	U	200	46	ug/L			07/31/17 19:15	200
Trichlorofluoromethane	200	U	200	100	ug/L			07/31/17 19:15	200
Chlorodibromomethane	200	U	200	50	ug/L			07/31/17 19:15	200
Methylcyclohexane	200	U	200	90	ug/L			07/31/17 19:15	200
Naphthalene	1100		200	50	ug/L			07/31/17 19:15	200

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-13

Date Collected: 07/19/17 08:30

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-7

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	82		61 - 138		07/31/17 19:15	200
4-Bromofluorobenzene (Surr)	93		69 - 120		07/31/17 19:15	200
Toluene-d8 (Surr)	89		73 - 120		07/31/17 19:15	200
Dibromofluoromethane (Surr)	84		69 - 124		07/31/17 19:15	200

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-14

Lab Sample ID: 240-82669-8

Date Collected: 07/19/17 08:50

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20000	U	20000	3500	ug/L			08/01/17 13:42	2000
Benzene	2000	U	2000	560	ug/L			08/01/17 13:42	2000
Dichlorobromomethane	2000	U	2000	600	ug/L			08/01/17 13:42	2000
Bromoform	2000	U	2000	860	ug/L			08/01/17 13:42	2000
Bromomethane	2000	U	2000	840	ug/L			08/01/17 13:42	2000
2-Butanone (MEK)	20000	U	20000	2000	ug/L			08/01/17 13:42	2000
Carbon disulfide	2000	U	2000	680	ug/L			08/01/17 13:42	2000
Carbon tetrachloride	2000	U	2000	700	ug/L			08/01/17 13:42	2000
Chlorobenzene	2000	U	2000	640	ug/L			08/01/17 13:42	2000
Chloroethane	2000	U	2000	820	ug/L			08/01/17 13:42	2000
Chloroform	2000	U	2000	620	ug/L			08/01/17 13:42	2000
Chloromethane	2000	U	2000	860	ug/L			08/01/17 13:42	2000
1,1-Dichloroethane	2000	U	2000	500	ug/L			08/01/17 13:42	2000
1,2-Dichloroethane	2000	U	2000	600	ug/L			08/01/17 13:42	2000
1,1-Dichloroethene	2000	U	2000	540	ug/L			08/01/17 13:42	2000
1,2-Dichloropropane	2000	U	2000	600	ug/L			08/01/17 13:42	2000
cis-1,3-Dichloropropene	2000	U	2000	520	ug/L			08/01/17 13:42	2000
trans-1,3-Dichloropropene	2000	U	2000	620	ug/L			08/01/17 13:42	2000
Ethylbenzene	2000	U	2000	520	ug/L			08/01/17 13:42	2000
2-Hexanone	20000	U	20000	2500	ug/L			08/01/17 13:42	2000
Methylene Chloride	2000	U	2000	1100	ug/L			08/01/17 13:42	2000
4-Methyl-2-pentanone (MIBK)	20000	U	20000	1400	ug/L			08/01/17 13:42	2000
Styrene	2000	U	2000	460	ug/L			08/01/17 13:42	2000
1,1,2,2-Tetrachloroethane	2000	U	2000	640	ug/L			08/01/17 13:42	2000
Tetrachloroethene	62000		2000	600	ug/L			08/01/17 13:42	2000
Toluene	2000	U	2000	460	ug/L			08/01/17 13:42	2000
Trichloroethene	2000	U	2000	660	ug/L			08/01/17 13:42	2000
Vinyl chloride	2000	U	2000	900	ug/L			08/01/17 13:42	2000
Xylenes, Total	4000	U	4000	480	ug/L			08/01/17 13:42	2000
1,1,1-Trichloroethane	2000	U	2000	460	ug/L			08/01/17 13:42	2000
1,1,2-Trichloroethane	2000	U	2000	680	ug/L			08/01/17 13:42	2000
Cyclohexane	2000	U	2000	880	ug/L			08/01/17 13:42	2000
1,2-Dibromo-3-Chloropropane	4000	U	4000	940	ug/L			08/01/17 13:42	2000
Ethylene Dibromide	2000	U	2000	460	ug/L			08/01/17 13:42	2000
Dichlorodifluoromethane	2000	U	2000	1000	ug/L			08/01/17 13:42	2000
cis-1,2-Dichloroethene	2000	U	2000	600	ug/L			08/01/17 13:42	2000
trans-1,2-Dichloroethene	2000	U	2000	580	ug/L			08/01/17 13:42	2000
Isopropylbenzene	2000	U	2000	420	ug/L			08/01/17 13:42	2000
Methyl acetate	20000	U	20000	2900	ug/L			08/01/17 13:42	2000
Methyl tert-butyl ether	2000	U	2000	540	ug/L			08/01/17 13:42	2000
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	U	2000	820	ug/L			08/01/17 13:42	2000
1,2,4-Trichlorobenzene	2000	U	2000	540	ug/L			08/01/17 13:42	2000
1,2-Dichlorobenzene	2000	U	2000	520	ug/L			08/01/17 13:42	2000
1,3-Dichlorobenzene	2000	U	2000	640	ug/L			08/01/17 13:42	2000
1,4-Dichlorobenzene	2000	U	2000	460	ug/L			08/01/17 13:42	2000
Trichlorofluoromethane	2000	U	2000	1000	ug/L			08/01/17 13:42	2000
Chlorodibromomethane	2000	U	2000	500	ug/L			08/01/17 13:42	2000
Methylcyclohexane	2000	U	2000	900	ug/L			08/01/17 13:42	2000
Naphthalene	1600	J	2000	500	ug/L			08/01/17 13:42	2000

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-14
Date Collected: 07/19/17 08:50
Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-8
Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	87		61 - 138		08/01/17 13:42	2000
4-Bromofluorobenzene (Surr)	92		69 - 120		08/01/17 13:42	2000
Toluene-d8 (Surr)	88		73 - 120		08/01/17 13:42	2000
Dibromofluoromethane (Surr)	87		69 - 124		08/01/17 13:42	2000

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-15

Lab Sample ID: 240-82669-9

Date Collected: 07/19/17 10:00

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1400	U	1400	250	ug/L			07/31/17 20:00	142.86
Benzene	140	U	140	40	ug/L			07/31/17 20:00	142.86
Dichlorobromomethane	140	U	140	43	ug/L			07/31/17 20:00	142.86
Bromoform	140	U	140	61	ug/L			07/31/17 20:00	142.86
Bromomethane	140	U	140	60	ug/L			07/31/17 20:00	142.86
2-Butanone (MEK)	1400	U	1400	150	ug/L			07/31/17 20:00	142.86
Carbon disulfide	140	U	140	49	ug/L			07/31/17 20:00	142.86
Carbon tetrachloride	140	U	140	50	ug/L			07/31/17 20:00	142.86
Chlorobenzene	140	U	140	46	ug/L			07/31/17 20:00	142.86
Chloroethane	140	U	140	59	ug/L			07/31/17 20:00	142.86
Chloroform	140	U	140	44	ug/L			07/31/17 20:00	142.86
Chloromethane	140	U	140	61	ug/L			07/31/17 20:00	142.86
1,1-Dichloroethane	140	U	140	36	ug/L			07/31/17 20:00	142.86
1,2-Dichloroethane	140	U	140	43	ug/L			07/31/17 20:00	142.86
1,1-Dichloroethene	140	U	140	39	ug/L			07/31/17 20:00	142.86
1,2-Dichloropropane	140	U	140	43	ug/L			07/31/17 20:00	142.86
cis-1,3-Dichloropropene	140	U	140	37	ug/L			07/31/17 20:00	142.86
trans-1,3-Dichloropropene	140	U	140	44	ug/L			07/31/17 20:00	142.86
Ethylbenzene	140	U	140	37	ug/L			07/31/17 20:00	142.86
2-Hexanone	1400	U	1400	180	ug/L			07/31/17 20:00	142.86
Methylene Chloride	140	U	140	76	ug/L			07/31/17 20:00	142.86
4-Methyl-2-pentanone (MIBK)	1400	U	1400	100	ug/L			07/31/17 20:00	142.86
Styrene	140	U	140	33	ug/L			07/31/17 20:00	142.86
1,1,2,2-Tetrachloroethane	140	U	140	46	ug/L			07/31/17 20:00	142.86
Tetrachloroethene	3100		140	43	ug/L			07/31/17 20:00	142.86
Toluene	140	U	140	33	ug/L			07/31/17 20:00	142.86
Trichloroethene	140	U	140	47	ug/L			07/31/17 20:00	142.86
Vinyl chloride	140	U	140	64	ug/L			07/31/17 20:00	142.86
Xylenes, Total	290	U	290	34	ug/L			07/31/17 20:00	142.86
1,1,1-Trichloroethane	140	U	140	33	ug/L			07/31/17 20:00	142.86
1,1,2-Trichloroethane	140	U	140	49	ug/L			07/31/17 20:00	142.86
Cyclohexane	140	U	140	63	ug/L			07/31/17 20:00	142.86
1,2-Dibromo-3-Chloropropane	290	U	290	67	ug/L			07/31/17 20:00	142.86
Ethylene Dibromide	140	U	140	33	ug/L			07/31/17 20:00	142.86
Dichlorodifluoromethane	140	U	140	71	ug/L			07/31/17 20:00	142.86
cis-1,2-Dichloroethene	140	U	140	43	ug/L			07/31/17 20:00	142.86
trans-1,2-Dichloroethene	140	U	140	41	ug/L			07/31/17 20:00	142.86
Isopropylbenzene	140	U	140	30	ug/L			07/31/17 20:00	142.86
Methyl acetate	1400	U	1400	200	ug/L			07/31/17 20:00	142.86
Methyl tert-butyl ether	140	U	140	39	ug/L			07/31/17 20:00	142.86
1,1,2-Trichloro-1,2,2-trifluoroethane	140	U	140	59	ug/L			07/31/17 20:00	142.86
1,2,4-Trichlorobenzene	140	U	140	39	ug/L			07/31/17 20:00	142.86
1,2-Dichlorobenzene	140	U	140	37	ug/L			07/31/17 20:00	142.86
1,3-Dichlorobenzene	140	U	140	46	ug/L			07/31/17 20:00	142.86
1,4-Dichlorobenzene	140	U	140	33	ug/L			07/31/17 20:00	142.86
Trichlorofluoromethane	140	U	140	71	ug/L			07/31/17 20:00	142.86
Chlorodibromomethane	140	U	140	36	ug/L			07/31/17 20:00	142.86
Methylcyclohexane	140	U	140	64	ug/L			07/31/17 20:00	142.86
Naphthalene	140	U	140	36	ug/L			07/31/17 20:00	142.86

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-15

Date Collected: 07/19/17 10:00

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-9

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	83		61 - 138		07/31/17 20:00	142.86
4-Bromofluorobenzene (Surr)	91		69 - 120		07/31/17 20:00	142.86
Toluene-d8 (Surr)	87		73 - 120		07/31/17 20:00	142.86
Dibromofluoromethane (Surr)	83		69 - 124		07/31/17 20:00	142.86

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-16

Lab Sample ID: 240-82669-10

Date Collected: 07/19/17 10:50

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2.2	J	10	1.8	ug/L			07/31/17 20:22	1
Benzene	1.0	U	1.0	0.28	ug/L			07/31/17 20:22	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			07/31/17 20:22	1
Bromoform	1.0	U	1.0	0.43	ug/L			07/31/17 20:22	1
Bromomethane	1.0	U	1.0	0.42	ug/L			07/31/17 20:22	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			07/31/17 20:22	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			07/31/17 20:22	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			07/31/17 20:22	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			07/31/17 20:22	1
Chloroethane	1.0	U	1.0	0.41	ug/L			07/31/17 20:22	1
Chloroform	1.0	U	1.0	0.31	ug/L			07/31/17 20:22	1
Chloromethane	1.0	U	1.0	0.43	ug/L			07/31/17 20:22	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			07/31/17 20:22	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			07/31/17 20:22	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			07/31/17 20:22	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			07/31/17 20:22	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			07/31/17 20:22	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			07/31/17 20:22	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			07/31/17 20:22	1
2-Hexanone	10	U	10	1.2	ug/L			07/31/17 20:22	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			07/31/17 20:22	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			07/31/17 20:22	1
Styrene	1.0	U	1.0	0.23	ug/L			07/31/17 20:22	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			07/31/17 20:22	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			07/31/17 20:22	1
Toluene	1.0	U	1.0	0.23	ug/L			07/31/17 20:22	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			07/31/17 20:22	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/31/17 20:22	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			07/31/17 20:22	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/31/17 20:22	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			07/31/17 20:22	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			07/31/17 20:22	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			07/31/17 20:22	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			07/31/17 20:22	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			07/31/17 20:22	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			07/31/17 20:22	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/31/17 20:22	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			07/31/17 20:22	1
Methyl acetate	10	U	10	1.4	ug/L			07/31/17 20:22	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			07/31/17 20:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			07/31/17 20:22	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			07/31/17 20:22	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			07/31/17 20:22	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			07/31/17 20:22	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			07/31/17 20:22	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			07/31/17 20:22	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			07/31/17 20:22	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			07/31/17 20:22	1
Naphthalene	1.0	U	1.0	0.25	ug/L			07/31/17 20:22	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-16

Lab Sample ID: 240-82669-10

Date Collected: 07/19/17 10:50

Matrix: Water

Date Received: 07/21/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	84		61 - 138		07/31/17 20:22	1
4-Bromofluorobenzene (Surr)	92		69 - 120		07/31/17 20:22	1
Toluene-d8 (Surr)	89		73 - 120		07/31/17 20:22	1
Dibromofluoromethane (Surr)	85		69 - 124		07/31/17 20:22	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-17

Lab Sample ID: 240-82669-11

Date Collected: 07/19/17 12:50

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	200	U	200	35	ug/L			07/31/17 20:44	20
Benzene	20	U	20	5.6	ug/L			07/31/17 20:44	20
Dichlorobromomethane	20	U	20	6.0	ug/L			07/31/17 20:44	20
Bromoform	20	U	20	8.6	ug/L			07/31/17 20:44	20
Bromomethane	20	U	20	8.4	ug/L			07/31/17 20:44	20
2-Butanone (MEK)	200	U	200	20	ug/L			07/31/17 20:44	20
Carbon disulfide	20	U	20	6.8	ug/L			07/31/17 20:44	20
Carbon tetrachloride	20	U	20	7.0	ug/L			07/31/17 20:44	20
Chlorobenzene	20	U	20	6.4	ug/L			07/31/17 20:44	20
Chloroethane	20	U	20	8.2	ug/L			07/31/17 20:44	20
Chloroform	20	U	20	6.2	ug/L			07/31/17 20:44	20
Chloromethane	20	U	20	8.6	ug/L			07/31/17 20:44	20
1,1-Dichloroethane	20	U	20	5.0	ug/L			07/31/17 20:44	20
1,2-Dichloroethane	20	U	20	6.0	ug/L			07/31/17 20:44	20
1,1-Dichloroethene	20	U	20	5.4	ug/L			07/31/17 20:44	20
1,2-Dichloropropane	20	U	20	6.0	ug/L			07/31/17 20:44	20
cis-1,3-Dichloropropene	20	U	20	5.2	ug/L			07/31/17 20:44	20
trans-1,3-Dichloropropene	20	U	20	6.2	ug/L			07/31/17 20:44	20
Ethylbenzene	20	U	20	5.2	ug/L			07/31/17 20:44	20
2-Hexanone	200	U	200	25	ug/L			07/31/17 20:44	20
Methylene Chloride	20	U	20	11	ug/L			07/31/17 20:44	20
4-Methyl-2-pentanone (MIBK)	200	U	200	14	ug/L			07/31/17 20:44	20
Styrene	20	U	20	4.6	ug/L			07/31/17 20:44	20
1,1,2,2-Tetrachloroethane	20	U	20	6.4	ug/L			07/31/17 20:44	20
Tetrachloroethene	610		20	6.0	ug/L			07/31/17 20:44	20
Toluene	20	U	20	4.6	ug/L			07/31/17 20:44	20
Trichloroethene	71		20	6.6	ug/L			07/31/17 20:44	20
Vinyl chloride	20	U	20	9.0	ug/L			07/31/17 20:44	20
Xylenes, Total	40	U	40	4.8	ug/L			07/31/17 20:44	20
1,1,1-Trichloroethane	20	U	20	4.6	ug/L			07/31/17 20:44	20
1,1,2-Trichloroethane	20	U	20	6.8	ug/L			07/31/17 20:44	20
Cyclohexane	20	U	20	8.8	ug/L			07/31/17 20:44	20
1,2-Dibromo-3-Chloropropane	40	U	40	9.4	ug/L			07/31/17 20:44	20
Ethylene Dibromide	20	U	20	4.6	ug/L			07/31/17 20:44	20
Dichlorodifluoromethane	20	U	20	10	ug/L			07/31/17 20:44	20
cis-1,2-Dichloroethene	86		20	6.0	ug/L			07/31/17 20:44	20
trans-1,2-Dichloroethene	14 J		20	5.8	ug/L			07/31/17 20:44	20
Isopropylbenzene	20	U	20	4.2	ug/L			07/31/17 20:44	20
Methyl acetate	200	U	200	29	ug/L			07/31/17 20:44	20
Methyl tert-butyl ether	20	U	20	5.4	ug/L			07/31/17 20:44	20
1,1,2-Trichloro-1,2,2-trifluoroethane	20	U	20	8.2	ug/L			07/31/17 20:44	20
1,2,4-Trichlorobenzene	20	U	20	5.4	ug/L			07/31/17 20:44	20
1,2-Dichlorobenzene	20	U	20	5.2	ug/L			07/31/17 20:44	20
1,3-Dichlorobenzene	20	U	20	6.4	ug/L			07/31/17 20:44	20
1,4-Dichlorobenzene	20	U	20	4.6	ug/L			07/31/17 20:44	20
Trichlorofluoromethane	20	U	20	10	ug/L			07/31/17 20:44	20
Chlorodibromomethane	20	U	20	5.0	ug/L			07/31/17 20:44	20
Methylcyclohexane	20	U	20	9.0	ug/L			07/31/17 20:44	20
Naphthalene	20	U	20	5.0	ug/L			07/31/17 20:44	20

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-17
Date Collected: 07/19/17 12:50
Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-11
Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	83		61 - 138		07/31/17 20:44	20
4-Bromofluorobenzene (Surr)	92		69 - 120		07/31/17 20:44	20
Toluene-d8 (Surr)	87		73 - 120		07/31/17 20:44	20
Dibromofluoromethane (Surr)	85		69 - 124		07/31/17 20:44	20

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-18

Lab Sample ID: 240-82669-12

Date Collected: 07/19/17 13:50

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	82	J	200	35	ug/L			07/31/17 21:06	20
Benzene	15	J	20	5.6	ug/L			07/31/17 21:06	20
Dichlorobromomethane	20	U	20	6.0	ug/L			07/31/17 21:06	20
Bromoform	20	U	20	8.6	ug/L			07/31/17 21:06	20
Bromomethane	20	U	20	8.4	ug/L			07/31/17 21:06	20
2-Butanone (MEK)	200	U	200	20	ug/L			07/31/17 21:06	20
Carbon disulfide	20	U	20	6.8	ug/L			07/31/17 21:06	20
Carbon tetrachloride	20	U	20	7.0	ug/L			07/31/17 21:06	20
Chlorobenzene	20	U	20	6.4	ug/L			07/31/17 21:06	20
Chloroethane	20	U	20	8.2	ug/L			07/31/17 21:06	20
Chloroform	20	U	20	6.2	ug/L			07/31/17 21:06	20
Chloromethane	20	U	20	8.6	ug/L			07/31/17 21:06	20
1,1-Dichloroethane	20	U	20	5.0	ug/L			07/31/17 21:06	20
1,2-Dichloroethane	20	U	20	6.0	ug/L			07/31/17 21:06	20
1,1-Dichloroethene	20	U	20	5.4	ug/L			07/31/17 21:06	20
1,2-Dichloropropane	20	U	20	6.0	ug/L			07/31/17 21:06	20
cis-1,3-Dichloropropene	20	U	20	5.2	ug/L			07/31/17 21:06	20
trans-1,3-Dichloropropene	20	U	20	6.2	ug/L			07/31/17 21:06	20
Ethylbenzene	20	U	20	5.2	ug/L			07/31/17 21:06	20
2-Hexanone	200	U	200	25	ug/L			07/31/17 21:06	20
Methylene Chloride	20	U	20	11	ug/L			07/31/17 21:06	20
4-Methyl-2-pentanone (MIBK)	200	U	200	14	ug/L			07/31/17 21:06	20
Styrene	20	U	20	4.6	ug/L			07/31/17 21:06	20
1,1,2,2-Tetrachloroethane	20	U	20	6.4	ug/L			07/31/17 21:06	20
Tetrachloroethene	660		20	6.0	ug/L			07/31/17 21:06	20
Toluene	20	U	20	4.6	ug/L			07/31/17 21:06	20
Trichloroethene	21		20	6.6	ug/L			07/31/17 21:06	20
Vinyl chloride	25		20	9.0	ug/L			07/31/17 21:06	20
Xylenes, Total	40	U	40	4.8	ug/L			07/31/17 21:06	20
1,1,1-Trichloroethane	20	U	20	4.6	ug/L			07/31/17 21:06	20
1,1,2-Trichloroethane	20	U	20	6.8	ug/L			07/31/17 21:06	20
Cyclohexane	20	U	20	8.8	ug/L			07/31/17 21:06	20
1,2-Dibromo-3-Chloropropane	40	U	40	9.4	ug/L			07/31/17 21:06	20
Ethylene Dibromide	20	U	20	4.6	ug/L			07/31/17 21:06	20
Dichlorodifluoromethane	20	U	20	10	ug/L			07/31/17 21:06	20
cis-1,2-Dichloroethene	25		20	6.0	ug/L			07/31/17 21:06	20
trans-1,2-Dichloroethene	8.4	J	20	5.8	ug/L			07/31/17 21:06	20
Isopropylbenzene	20	U	20	4.2	ug/L			07/31/17 21:06	20
Methyl acetate	200	U	200	29	ug/L			07/31/17 21:06	20
Methyl tert-butyl ether	20	U	20	5.4	ug/L			07/31/17 21:06	20
1,1,2-Trichloro-1,2,2-trifluoroethane	20	U	20	8.2	ug/L			07/31/17 21:06	20
1,2,4-Trichlorobenzene	20	U	20	5.4	ug/L			07/31/17 21:06	20
1,2-Dichlorobenzene	20	U	20	5.2	ug/L			07/31/17 21:06	20
1,3-Dichlorobenzene	20	U	20	6.4	ug/L			07/31/17 21:06	20
1,4-Dichlorobenzene	20	U	20	4.6	ug/L			07/31/17 21:06	20
Trichlorofluoromethane	20	U	20	10	ug/L			07/31/17 21:06	20
Chlorodibromomethane	20	U	20	5.0	ug/L			07/31/17 21:06	20
Methylcyclohexane	20	U	20	9.0	ug/L			07/31/17 21:06	20
Naphthalene	6.7	J	20	5.0	ug/L			07/31/17 21:06	20

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-18
Date Collected: 07/19/17 13:50
Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-12
Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	83		61 - 138		07/31/17 21:06	20
4-Bromofluorobenzene (Surr)	92		69 - 120		07/31/17 21:06	20
Toluene-d8 (Surr)	88		73 - 120		07/31/17 21:06	20
Dibromofluoromethane (Surr)	85		69 - 124		07/31/17 21:06	20

- 1
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- 14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82669-13

Date Collected: 07/19/17 00:00

Matrix: Water

Date Received: 07/21/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			07/31/17 21:29	1
Benzene	1.0	U	1.0	0.28	ug/L			07/31/17 21:29	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			07/31/17 21:29	1
Bromoform	1.0	U	1.0	0.43	ug/L			07/31/17 21:29	1
Bromomethane	1.0	U	1.0	0.42	ug/L			07/31/17 21:29	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			07/31/17 21:29	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			07/31/17 21:29	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			07/31/17 21:29	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			07/31/17 21:29	1
Chloroethane	1.0	U	1.0	0.41	ug/L			07/31/17 21:29	1
Chloroform	1.0	U	1.0	0.31	ug/L			07/31/17 21:29	1
Chloromethane	1.0	U	1.0	0.43	ug/L			07/31/17 21:29	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			07/31/17 21:29	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			07/31/17 21:29	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			07/31/17 21:29	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			07/31/17 21:29	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			07/31/17 21:29	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			07/31/17 21:29	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			07/31/17 21:29	1
2-Hexanone	10	U	10	1.2	ug/L			07/31/17 21:29	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			07/31/17 21:29	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			07/31/17 21:29	1
Styrene	1.0	U	1.0	0.23	ug/L			07/31/17 21:29	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			07/31/17 21:29	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			07/31/17 21:29	1
Toluene	1.0	U	1.0	0.23	ug/L			07/31/17 21:29	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			07/31/17 21:29	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/31/17 21:29	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			07/31/17 21:29	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/31/17 21:29	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			07/31/17 21:29	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			07/31/17 21:29	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			07/31/17 21:29	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			07/31/17 21:29	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			07/31/17 21:29	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			07/31/17 21:29	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/31/17 21:29	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			07/31/17 21:29	1
Methyl acetate	10	U	10	1.4	ug/L			07/31/17 21:29	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			07/31/17 21:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			07/31/17 21:29	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			07/31/17 21:29	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			07/31/17 21:29	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			07/31/17 21:29	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			07/31/17 21:29	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			07/31/17 21:29	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			07/31/17 21:29	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			07/31/17 21:29	1
Naphthalene	1.0	U	1.0	0.25	ug/L			07/31/17 21:29	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82669-13

Date Collected: 07/19/17 00:00

Matrix: Water

Date Received: 07/21/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	82		61 - 138		07/31/17 21:29	1
4-Bromofluorobenzene (Surr)	91		69 - 120		07/31/17 21:29	1
Toluene-d8 (Surr)	88		73 - 120		07/31/17 21:29	1
Dibromofluoromethane (Surr)	84		69 - 124		07/31/17 21:29	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (61-138)	BFB (69-120)	TOL (73-120)	DBFM (69-124)
240-82669-1	W-170719-RA-07	84	92	87	85
240-82669-2	W-170719-RA-08	83	91	87	84
240-82669-3	W-170719-RA-09	84	92	88	85
240-82669-4	W-170719-RA-10	83	92	88	84
240-82669-5	W-170719-RA-11	81	93	92	86
240-82669-6	W-170719-RA-12	85	93	85	85
240-82669-7	W-170719-RA-13	82	93	89	84
240-82669-8	W-170719-RA-14	87	92	88	87
240-82669-9	W-170719-RA-15	83	91	87	83
240-82669-10	W-170719-RA-16	84	92	89	85
240-82669-11	W-170719-RA-17	83	92	87	85
240-82669-12	W-170719-RA-18	83	92	88	85
240-82669-13	TRIP BLANK	82	91	88	84
LCS 240-289324/4	Lab Control Sample	85	96	90	87
LCS 240-289459/4	Lab Control Sample	85	96	89	88
MB 240-289324/6	Method Blank	85	95	88	85
MB 240-289459/6	Method Blank	76	83	79	78

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-289324/6

Matrix: Water

Analysis Batch: 289324

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			07/31/17 13:19	1
Benzene	1.0	U	1.0	0.28	ug/L			07/31/17 13:19	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			07/31/17 13:19	1
Bromoform	1.0	U	1.0	0.43	ug/L			07/31/17 13:19	1
Bromomethane	1.0	U	1.0	0.42	ug/L			07/31/17 13:19	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			07/31/17 13:19	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			07/31/17 13:19	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			07/31/17 13:19	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			07/31/17 13:19	1
Chloroethane	1.0	U	1.0	0.41	ug/L			07/31/17 13:19	1
Chloroform	1.0	U	1.0	0.31	ug/L			07/31/17 13:19	1
Chloromethane	1.0	U	1.0	0.43	ug/L			07/31/17 13:19	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			07/31/17 13:19	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			07/31/17 13:19	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			07/31/17 13:19	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			07/31/17 13:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			07/31/17 13:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			07/31/17 13:19	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			07/31/17 13:19	1
2-Hexanone	10	U	10	1.2	ug/L			07/31/17 13:19	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			07/31/17 13:19	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			07/31/17 13:19	1
Styrene	1.0	U	1.0	0.23	ug/L			07/31/17 13:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			07/31/17 13:19	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			07/31/17 13:19	1
Toluene	1.0	U	1.0	0.23	ug/L			07/31/17 13:19	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			07/31/17 13:19	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/31/17 13:19	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			07/31/17 13:19	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/31/17 13:19	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			07/31/17 13:19	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			07/31/17 13:19	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			07/31/17 13:19	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			07/31/17 13:19	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			07/31/17 13:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			07/31/17 13:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/31/17 13:19	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			07/31/17 13:19	1
Methyl acetate	10	U	10	1.4	ug/L			07/31/17 13:19	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			07/31/17 13:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			07/31/17 13:19	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			07/31/17 13:19	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			07/31/17 13:19	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			07/31/17 13:19	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			07/31/17 13:19	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			07/31/17 13:19	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			07/31/17 13:19	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			07/31/17 13:19	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-289324/6

Matrix: Water

Analysis Batch: 289324

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	1.0	U	1.0	0.25	ug/L			07/31/17 13:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		61 - 138		07/31/17 13:19	1
4-Bromofluorobenzene (Surr)	95		69 - 120		07/31/17 13:19	1
Toluene-d8 (Surr)	88		73 - 120		07/31/17 13:19	1
Dibromofluoromethane (Surr)	85		69 - 124		07/31/17 13:19	1

Lab Sample ID: LCS 240-289324/4

Matrix: Water

Analysis Batch: 289324

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	18.4		ug/L		92	35 - 131
Benzene	10.0	9.44		ug/L		94	79 - 120
Dichlorobromomethane	10.0	9.67		ug/L		97	79 - 125
Bromoform	10.0	8.77		ug/L		88	55 - 145
Bromomethane	10.0	11.0		ug/L		110	17 - 158
2-Butanone (MEK)	20.0	18.5		ug/L		92	43 - 149
Carbon disulfide	10.0	9.60		ug/L		96	49 - 141
Carbon tetrachloride	10.0	9.77		ug/L		98	55 - 171
Chlorobenzene	10.0	9.37		ug/L		94	80 - 120
Chloroethane	10.0	11.2		ug/L		112	10 - 149
Chloroform	10.0	9.40		ug/L		94	80 - 120
Chloromethane	10.0	10.5		ug/L		105	59 - 124
1,1-Dichloroethane	10.0	9.56		ug/L		96	74 - 120
1,2-Dichloroethane	10.0	9.41		ug/L		94	68 - 133
1,1-Dichloroethene	10.0	10.7		ug/L		107	65 - 127
1,2-Dichloropropane	10.0	10.1		ug/L		101	78 - 127
cis-1,3-Dichloropropene	10.0	10.5		ug/L		105	75 - 120
trans-1,3-Dichloropropene	10.0	9.77		ug/L		98	67 - 120
Ethylbenzene	10.0	9.45		ug/L		94	80 - 120
2-Hexanone	20.0	17.6		ug/L		88	28 - 169
Methylene Chloride	10.0	9.00		ug/L		90	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	18.5		ug/L		92	53 - 144
Styrene	10.0	9.38		ug/L		94	80 - 121
1,1,2,2-Tetrachloroethane	10.0	9.59		ug/L		96	58 - 122
Tetrachloroethene	10.0	9.44		ug/L		94	80 - 122
Toluene	10.0	9.50		ug/L		95	78 - 120
Trichloroethene	10.0	9.56		ug/L		96	76 - 124
Vinyl chloride	10.0	10.6		ug/L		106	65 - 124
Xylenes, Total	20.0	18.6		ug/L		93	80 - 120
1,1,1-Trichloroethane	10.0	9.56		ug/L		96	64 - 147
1,1,2-Trichloroethane	10.0	9.68		ug/L		97	76 - 121
Cyclohexane	10.0	9.81		ug/L		98	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	9.06		ug/L		91	50 - 130
Ethylene Dibromide	10.0	9.50		ug/L		95	80 - 120
Dichlorodifluoromethane	10.0	9.39		ug/L		94	42 - 141

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-289324/4

Matrix: Water

Analysis Batch: 289324

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	10.0	9.40		ug/L		94	77 - 120
trans-1,2-Dichloroethene	10.0	9.53		ug/L		95	74 - 124
Isopropylbenzene	10.0	9.21		ug/L		92	80 - 128
Methyl acetate	20.0	18.5		ug/L		93	63 - 137
Methyl tert-butyl ether	10.0	9.50		ug/L		95	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.0		ug/L		110	65 - 144
1,2,4-Trichlorobenzene	10.0	8.46		ug/L		85	34 - 141
1,2-Dichlorobenzene	10.0	9.34		ug/L		93	80 - 120
1,3-Dichlorobenzene	10.0	9.34		ug/L		93	80 - 120
1,4-Dichlorobenzene	10.0	9.14		ug/L		91	80 - 120
Trichlorofluoromethane	10.0	11.5		ug/L		115	27 - 176
Chlorodibromomethane	10.0	9.83		ug/L		98	64 - 129
Methylcyclohexane	10.0	9.19		ug/L		92	63 - 141
m-Xylene & p-Xylene	10.0	9.28		ug/L		93	80 - 120
o-Xylene	10.0	9.35		ug/L		94	80 - 120
Naphthalene	10.0	8.05		ug/L		80	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	85		61 - 138
4-Bromofluorobenzene (Surr)	96		69 - 120
Toluene-d8 (Surr)	90		73 - 120
Dibromofluoromethane (Surr)	87		69 - 124

Lab Sample ID: MB 240-289459/6

Matrix: Water

Analysis Batch: 289459

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/01/17 12:35	1
Benzene	1.0	U	1.0	0.28	ug/L			08/01/17 12:35	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/01/17 12:35	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/01/17 12:35	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/01/17 12:35	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/01/17 12:35	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/01/17 12:35	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/01/17 12:35	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/01/17 12:35	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/01/17 12:35	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/01/17 12:35	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/01/17 12:35	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/01/17 12:35	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/01/17 12:35	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/01/17 12:35	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/01/17 12:35	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/01/17 12:35	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/01/17 12:35	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/01/17 12:35	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-289459/6
Matrix: Water
Analysis Batch: 289459

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Hexanone	10	U	10	1.2	ug/L			08/01/17 12:35	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/01/17 12:35	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/01/17 12:35	1
Styrene	1.0	U	1.0	0.23	ug/L			08/01/17 12:35	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/01/17 12:35	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/01/17 12:35	1
Toluene	1.0	U	1.0	0.23	ug/L			08/01/17 12:35	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/01/17 12:35	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/01/17 12:35	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/01/17 12:35	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/01/17 12:35	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/01/17 12:35	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/01/17 12:35	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/01/17 12:35	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/01/17 12:35	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/01/17 12:35	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/01/17 12:35	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/01/17 12:35	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/01/17 12:35	1
Methyl acetate	10	U	10	1.4	ug/L			08/01/17 12:35	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/01/17 12:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/01/17 12:35	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/01/17 12:35	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/01/17 12:35	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/01/17 12:35	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/01/17 12:35	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/01/17 12:35	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/01/17 12:35	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/01/17 12:35	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/01/17 12:35	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	76		61 - 138		08/01/17 12:35	1
4-Bromofluorobenzene (Surr)	83		69 - 120		08/01/17 12:35	1
Toluene-d8 (Surr)	79		73 - 120		08/01/17 12:35	1
Dibromofluoromethane (Surr)	78		69 - 124		08/01/17 12:35	1

Lab Sample ID: LCS 240-289459/4
Matrix: Water
Analysis Batch: 289459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Acetone	20.0	20.3		ug/L		101	35 - 131
Benzene	10.0	9.61		ug/L		96	79 - 120
Dichlorobromomethane	10.0	9.68		ug/L		97	79 - 125
Bromoform	10.0	8.64		ug/L		86	55 - 145
Bromomethane	10.0	12.2		ug/L		122	17 - 158
2-Butanone (MEK)	20.0	19.0		ug/L		95	43 - 149

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-289459/4

Matrix: Water

Analysis Batch: 289459

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	10.0	9.83		ug/L		98	49 - 141
Carbon tetrachloride	10.0	9.77		ug/L		98	55 - 171
Chlorobenzene	10.0	9.76		ug/L		98	80 - 120
Chloroethane	10.0	11.0		ug/L		110	10 - 149
Chloroform	10.0	9.75		ug/L		98	80 - 120
Chloromethane	10.0	10.3		ug/L		103	59 - 124
1,1-Dichloroethane	10.0	9.75		ug/L		97	74 - 120
1,2-Dichloroethane	10.0	9.65		ug/L		97	68 - 133
1,1-Dichloroethene	10.0	11.1		ug/L		111	65 - 127
1,2-Dichloropropane	10.0	10.2		ug/L		102	78 - 127
cis-1,3-Dichloropropene	10.0	10.3		ug/L		103	75 - 120
trans-1,3-Dichloropropene	10.0	9.44		ug/L		94	67 - 120
Ethylbenzene	10.0	9.60		ug/L		96	80 - 120
2-Hexanone	20.0	18.0		ug/L		90	28 - 169
Methylene Chloride	10.0	9.42		ug/L		94	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	18.9		ug/L		94	53 - 144
Styrene	10.0	9.57		ug/L		96	80 - 121
1,1,2,2-Tetrachloroethane	10.0	9.64		ug/L		96	58 - 122
Tetrachloroethene	10.0	9.71		ug/L		97	80 - 122
Toluene	10.0	9.73		ug/L		97	78 - 120
Trichloroethene	10.0	9.91		ug/L		99	76 - 124
Vinyl chloride	10.0	10.4		ug/L		104	65 - 124
Xylenes, Total	20.0	19.1		ug/L		96	80 - 120
1,1,1-Trichloroethane	10.0	9.62		ug/L		96	64 - 147
1,1,2-Trichloroethane	10.0	10.3		ug/L		103	76 - 121
Cyclohexane	10.0	9.65		ug/L		97	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	8.35		ug/L		84	50 - 130
Ethylene Dibromide	10.0	9.72		ug/L		97	80 - 120
Dichlorodifluoromethane	10.0	9.25		ug/L		93	42 - 141
cis-1,2-Dichloroethene	10.0	9.77		ug/L		98	77 - 120
trans-1,2-Dichloroethene	10.0	10.1		ug/L		101	74 - 124
Isopropylbenzene	10.0	9.51		ug/L		95	80 - 128
Methyl acetate	20.0	18.2		ug/L		91	63 - 137
Methyl tert-butyl ether	10.0	9.62		ug/L		96	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.3		ug/L		113	65 - 144
1,2,4-Trichlorobenzene	10.0	8.43		ug/L		84	34 - 141
1,2-Dichlorobenzene	10.0	9.39		ug/L		94	80 - 120
1,3-Dichlorobenzene	10.0	9.47		ug/L		95	80 - 120
1,4-Dichlorobenzene	10.0	9.33		ug/L		93	80 - 120
Trichlorofluoromethane	10.0	11.7		ug/L		117	27 - 176
Chlorodibromomethane	10.0	9.77		ug/L		98	64 - 129
Methylcyclohexane	10.0	9.38		ug/L		94	63 - 141
m-Xylene & p-Xylene	10.0	9.45		ug/L		94	80 - 120
o-Xylene	10.0	9.68		ug/L		97	80 - 120
Naphthalene	10.0	7.94		ug/L		79	31 - 127

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-289459/4

Matrix: Water

Analysis Batch: 289459

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	85		61 - 138
4-Bromofluorobenzene (Surr)	96		69 - 120
Toluene-d8 (Surr)	89		73 - 120
Dibromofluoromethane (Surr)	88		69 - 124

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

GC/MS VOA

Analysis Batch: 289324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82669-1	W-170719-RA-07	Total/NA	Water	8260B	
240-82669-2	W-170719-RA-08	Total/NA	Water	8260B	
240-82669-3	W-170719-RA-09	Total/NA	Water	8260B	
240-82669-4	W-170719-RA-10	Total/NA	Water	8260B	
240-82669-7	W-170719-RA-13	Total/NA	Water	8260B	
240-82669-9	W-170719-RA-15	Total/NA	Water	8260B	
240-82669-10	W-170719-RA-16	Total/NA	Water	8260B	
240-82669-11	W-170719-RA-17	Total/NA	Water	8260B	
240-82669-12	W-170719-RA-18	Total/NA	Water	8260B	
240-82669-13	TRIP BLANK	Total/NA	Water	8260B	
MB 240-289324/6	Method Blank	Total/NA	Water	8260B	
LCS 240-289324/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 289459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82669-5	W-170719-RA-11	Total/NA	Water	8260B	
240-82669-6	W-170719-RA-12	Total/NA	Water	8260B	
240-82669-8	W-170719-RA-14	Total/NA	Water	8260B	
MB 240-289459/6	Method Blank	Total/NA	Water	8260B	
LCS 240-289459/4	Lab Control Sample	Total/NA	Water	8260B	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-07

Date Collected: 07/19/17 08:15

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	289324	07/31/17 17:02	LEE	TAL CAN

Client Sample ID: W-170719-RA-08

Date Collected: 07/19/17 09:10

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		3.33	289324	07/31/17 17:24	LEE	TAL CAN

Client Sample ID: W-170719-RA-09

Date Collected: 07/19/17 10:20

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	289324	07/31/17 17:46	LEE	TAL CAN

Client Sample ID: W-170719-RA-10

Date Collected: 07/19/17 10:20

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	289324	07/31/17 18:08	LEE	TAL CAN

Client Sample ID: W-170719-RA-11

Date Collected: 07/19/17 11:00

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	289459	08/01/17 14:04	LEE	TAL CAN

Client Sample ID: W-170719-RA-12

Date Collected: 07/19/17 12:55

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	289459	08/01/17 14:27	LEE	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: W-170719-RA-13

Date Collected: 07/19/17 08:30

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		200	289324	07/31/17 19:15	LEE	TAL CAN

Client Sample ID: W-170719-RA-14

Date Collected: 07/19/17 08:50

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2000	289459	08/01/17 13:42	LEE	TAL CAN

Client Sample ID: W-170719-RA-15

Date Collected: 07/19/17 10:00

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		142.86	289324	07/31/17 20:00	LEE	TAL CAN

Client Sample ID: W-170719-RA-16

Date Collected: 07/19/17 10:50

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	289324	07/31/17 20:22	LEE	TAL CAN

Client Sample ID: W-170719-RA-17

Date Collected: 07/19/17 12:50

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	289324	07/31/17 20:44	LEE	TAL CAN

Client Sample ID: W-170719-RA-18

Date Collected: 07/19/17 13:50

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82669-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	289324	07/31/17 21:06	LEE	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82669-13

Date Collected: 07/19/17 00:00

Matrix: Water

Date Received: 07/21/17 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	289324	07/31/17 21:29	LEE	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82669-1

Laboratory: TestAmerica Canton

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999518190	08-31-17

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	Cyclohexane
8260B		Water	Methyl acetate
8260B		Water	Methylcyclohexane





CONESTOGA-ROVERS & ASSOCIATES

CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States

Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: **SP-02424**

PAGE OF

(See Reverse Side for Instructions)

Project No/Phase/Task Code: 33751				Laboratory Name: TestAmerica				Lab Location:				SSOW ID:							
Project Name: 6714 Walker St				Lab Contact:				Lab Quote No:				Cooler No:							
Project Location: SLP				SAMPLE TYPE				CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)							
Chemistry Contact: G Anderson				Matrix Code (see back of COC) Grab (G) or Comp (C)				Unpreserved Hydrochloric Acid (HCl) Nitric Acid (HNO ₃) Sulfuric Acid (H ₂ SO ₄) Sodium Hydroxide (NaOH) Methanol/Water (Soil VOC) EnCores 3x5-g, 1x25-g Other:				Total Containers/Sample VOCs				Carrier:			
Sampler(s): R. Amundson & K. Jenkin																Airbill No:			
DATE (mm/dd/yy)				TIME (hh:mm)				MS/MSD Request				Date Shipped:							
Item				SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)				COMMENTS/ SPECIAL INSTRUCTIONS:											
1				W-170719-14-07 8:15 7/17/17 800 W6 G 3															
2				RA-08 9:10 3															
3				RA-09 10:20 3															
4				RA-10 10:20 3															
5				RA-11 11:00 3															
6				RA-12 12:55 3															
7				RA-13 830 3															
8				RA-14 850 3															
9				RA-15 1000 3															
10				RA-16 1000 3															
11				RA-17 1250 3															
12				W-170719-RA-18 1330 3															
13				Trip blank															
14																			
15																			
TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:								Total Number of Containers: 37				Notes/ Special Requirements:							
All Samples in Cooler must be on COC																			
RELINQUISHED BY		COMPANY		DATE		TIME		RECEIVED BY		COMPANY		DATE		TIME					
1. [Signature]		GARD		7/17/17				1. [Signature]		TA		7/21/17		920					
2.								2.											
3.								3.											



THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE - Fully Executed Copy (CRA) YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampling Crew CRA Form: COC-10A (20110804)





CONESTOGA-ROVERS & ASSOCIATES

5-1/5-1

CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States

Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: **SP-02424**

PAGE OF

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 88751				Laboratory Name: TestAmerica				Lab Location:				SSOW ID:							
Project Name: 6714 Walker St				Lab Contact:				Lab Quote No:				Cooler No:							
Project Location: SLP				SAMPLE TYPE		CONTAINER QUANTITY & PRESERVATION						ANALYSIS REQUESTED (See Back of COC for Definitions)				Carrier:			
Chemistry Contact: G Anderson				Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample VOS	MS/MSD Request	Airbill No:			
Sampler(s): R. Hunt + K. Jenkin																Date Shipped:			
Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)			DATE (mm/dd/yy)	TIME (hh:mm)												COMMENTS/ SPECIAL INSTRUCTIONS:		
1	W-170719-PA-07			7/19/17	800	W6	G	3											
2	PA-08							3											
3	PA-09							3											
	PA-10							3											
	PA-11							3											
	PA-12							3											
	PA-13				830			3											
	PA-14				850			3											
	PA-15				1000			3											
	PA-16				1080			3											
	PA-17				1250			3											
	W-170719-PA-18				1350			3											
	trip blank																		
TAT Required in business days (use separate COCs for different TATs):						Total Number of Containers: 37						Notes/ Special Requirements:							
<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:						All Samples in Cooler must be on COC													
RELINQUISHED BY				COMPANY		DATE		TIME		RECEIVED BY				COMPANY		DATE		TIME	
				GHD		7/19/17				1. Zahradsky				TA		7/21/17		920	
										2.									
										3.									



THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE - Fully Executed Copy (CRA) YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampling Crew CRA Form: COC-10A (20110804)



10/16/2017 (Rev. 1)

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 82669

Client CRA Site Name _____
 Cooler Received on 7/21/17 Opened on 7/21/17
 FedEx: 1st Grd UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Cooler unpacked by:
Zachary King

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box _____ Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0 °C) Observed Cooler Temp. 5.1 °C Corrected Cooler Temp. 5.7 °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
 4. Did custody papers accompany the sample(s)? Yes No
 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
 7. Did all bottles arrive in good condition (Unbroken)? Yes No
 8. Could all bottle labels be reconciled with the COC? Yes No
 9. Were correct bottle(s) used for the test(s) indicated? Yes No
 10. Sufficient quantity received to perform indicated analyses? Yes No
 11. Are these work share samples? Yes No
 If yes, Questions 11-15 have been checked at the originating laboratory.
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC697954
 12. Were VOAs on the COC? Yes No
 13. Were air bubbles >6 mm in any VOA vials? Yes No NA  Larger than this.
 14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B630301113 Yes No
 15. Was a LL Hg or Me Hg trip blank present? Yes No
- Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

All VOAs received with bubbles

17. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

Ref: SOP NC-SC-0005, Sample Receiving
 \\acorp\corp\QA\QA_Facilities\Canton-QA\Document-Management\Work-Instruction\Word Version Work Instructions\WI-NC-099-052317 Cooler Receipt Form.doc djl

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-82670-1

Client Project/Site: 88751, Hinshaw & Culbertson

For:

GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson



Authorized for release by:
7/27/2017 11:47:20 AM

Denise Heckler, Project Manager II
(330)966-9477

denise.heckler@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Job ID: 240-82670-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-82670-1

Comments

No additional comments.

Receipt

The samples were received on 7/21/2017 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.1° C.

GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for preparation batch 240-288478 and analytical batch 240-288594 recovered outside control limits for the following analytes: 1,1,2,2-Tetrachloroethane. This analyte was biased high in the LCS and was not detected in the associated samples.

Method(s) 8260B: The method blank for preparation batch 240-288478 and analytical batch 240-288594 contained Methylene Chloride above the reporting limit (RL). This compound is considered a common laboratory contaminant. The associated sample(s): S-170720-RA-05 (240-82670-2), S-170720-RA-09 (240-82670-6), S-170720-RA-07 (240-82670-4), S-170720-RA-08 (240-82670-5), S-170720-RA-04 (240-82670-1), S-170720-RA-06 (240-82670-3) were not re-extracted and/or re-analyzed because the concentration of the common lab contaminant in the method blank was less than 5 times the RL.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-288478 and analytical batch 240-288594.

Method(s) 8260B: Surrogate recovery for the following sample was outside of acceptance limits: S-170720-RA-04 (240-82670-1). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-288418 and analytical batch 240-288594.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-288461 and analytical batch 240-288594.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-82670-1	S-170720-RA-04	Solid	07/20/17 10:45	07/21/17 09:20
240-82670-2	S-170720-RA-05	Solid	07/20/17 10:45	07/21/17 09:20
240-82670-3	S-170720-RA-06	Solid	07/20/17 11:20	07/21/17 09:20
240-82670-4	S-170720-RA-07	Solid	07/20/17 11:20	07/21/17 09:20
240-82670-5	S-170720-RA-08	Solid	07/20/17 11:30	07/21/17 09:20
240-82670-6	S-170720-RA-09	Solid	07/20/17 13:40	07/21/17 09:20

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Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-04

Lab Sample ID: 240-82670-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	470		400	55	ug/Kg	1	☒	8260B	Total/NA
Methylene Chloride	400	B	400	100	ug/Kg	1	☒	8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	510	J	1600	63	ug/Kg	1	☒	8260B	Total/NA
Tetrachloroethene	81	J	400	33	ug/Kg	1	☒	8260B	Total/NA
Xylenes, Total	2800		790	44	ug/Kg	1	☒	8260B	Total/NA

Client Sample ID: S-170720-RA-05

Lab Sample ID: 240-82670-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	25		24	3.7	ug/Kg	1	☒	8260B	Total/NA
2-Butanone (MEK)	3.2	J	24	1.5	ug/Kg	1	☒	8260B	Total/NA
Methylene Chloride	4.6	J B	6.1	0.29	ug/Kg	1	☒	8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	1.2	J	24	1.1	ug/Kg	1	☒	8260B	Total/NA
Tetrachloroethene	0.86	J	6.1	0.45	ug/Kg	1	☒	8260B	Total/NA
Toluene	0.51	J	6.1	0.41	ug/Kg	1	☒	8260B	Total/NA
Xylenes, Total	1.5	J	12	0.48	ug/Kg	1	☒	8260B	Total/NA
Naphthalene	2.3	J	6.1	0.40	ug/Kg	1	☒	8260B	Total/NA

Client Sample ID: S-170720-RA-06

Lab Sample ID: 240-82670-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	260	B	250	66	ug/Kg	1	☒	8260B	Total/NA
Tetrachloroethene	1100		250	21	ug/Kg	1	☒	8260B	Total/NA

Client Sample ID: S-170720-RA-07

Lab Sample ID: 240-82670-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	7.5	J	16	2.5	ug/Kg	1	☒	8260B	Total/NA
Carbon tetrachloride	0.20	J	4.1	0.20	ug/Kg	1	☒	8260B	Total/NA
Methylene Chloride	2.4	J B	4.1	0.20	ug/Kg	1	☒	8260B	Total/NA
Tetrachloroethene	1.1	J	4.1	0.30	ug/Kg	1	☒	8260B	Total/NA
Toluene	0.34	J	4.1	0.28	ug/Kg	1	☒	8260B	Total/NA

Client Sample ID: S-170720-RA-08

Lab Sample ID: 240-82670-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.1	J	18	2.8	ug/Kg	1	☒	8260B	Total/NA
Benzene	4.5		4.5	0.29	ug/Kg	1	☒	8260B	Total/NA
Carbon disulfide	0.62	J	4.5	0.19	ug/Kg	1	☒	8260B	Total/NA
1,1-Dichloroethene	1.1	J	4.5	0.49	ug/Kg	1	☒	8260B	Total/NA
Methylene Chloride	3.1	J B	4.5	0.22	ug/Kg	1	☒	8260B	Total/NA
Toluene	0.74	J	4.5	0.31	ug/Kg	1	☒	8260B	Total/NA
Trichloroethene	0.63	J	4.5	0.37	ug/Kg	1	☒	8260B	Total/NA
Vinyl chloride	8.8		4.5	0.25	ug/Kg	1	☒	8260B	Total/NA
Xylenes, Total	3.3	J	9.0	0.36	ug/Kg	1	☒	8260B	Total/NA
cis-1,2-Dichloroethene	98		4.5	0.25	ug/Kg	1	☒	8260B	Total/NA
trans-1,2-Dichloroethene	14		4.5	0.34	ug/Kg	1	☒	8260B	Total/NA
Isopropylbenzene	0.74	J	4.5	0.18	ug/Kg	1	☒	8260B	Total/NA
Methylcyclohexane	1.6	J	9.0	0.21	ug/Kg	1	☒	8260B	Total/NA
Naphthalene	6.2		4.5	0.30	ug/Kg	1	☒	8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-09

Lab Sample ID: 240-82670-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	250	B	230	60	ug/Kg	1	☼	8260B	Total/NA
Tetrachloroethene	360		230	19	ug/Kg	1	☼	8260B	Total/NA
cis-1,2-Dichloroethene	34	J	230	32	ug/Kg	1	☼	8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-04

Lab Sample ID: 240-82670-1

Date Collected: 07/20/17 10:45

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 99.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1600	U	1600	150	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Benzene	400	U	400	38	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Dichlorobromomethane	400	U	400	28	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Bromoform	400	U	400	36	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Bromomethane	400	U	400	44	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
2-Butanone (MEK)	1600	U	1600	79	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Carbon disulfide	400	U	400	28	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Carbon tetrachloride	400	U	400	43	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Chlorobenzene	400	U	400	47	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Chloroethane	400	U	400	44	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Chloroform	400	U	400	38	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Chloromethane	400	U	400	28	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,1-Dichloroethane	400	U	400	49	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,2-Dichloroethane	400	U	400	47	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,1-Dichloroethene	400	U	400	57	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,2-Dichloropropane	400	U	400	47	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
cis-1,3-Dichloropropene	400	U	400	36	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
trans-1,3-Dichloropropene	400	U	400	24	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Ethylbenzene	470		400	55	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
2-Hexanone	1600	U	1600	140	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Methylene Chloride	400 B		400	100	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
4-Methyl-2-pentanone (MIBK)	510 J		1600	63	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Styrene	400	U	400	16	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,1,2,2-Tetrachloroethane	400	U	400	38	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Tetrachloroethene	81 J		400	33	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Toluene	400	U	400	38	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Trichloroethene	400	U	400	58	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Vinyl chloride	400	U	400	27	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Xylenes, Total	2800		790	44	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,1,1-Trichloroethane	400	U	400	44	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,1,2-Trichloroethane	400	U	400	36	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Cyclohexane	790	U	790	47	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,2-Dibromo-3-Chloropropane	790	U	790	76	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Ethylene Dibromide	400	U	400	36	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Dichlorodifluoromethane	400	U	400	35	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
cis-1,2-Dichloroethene	400	U	400	55	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
trans-1,2-Dichloroethene	400	U	400	55	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Isopropylbenzene	400	U	400	54	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Methyl acetate	2000	U	2000	120	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Methyl tert-butyl ether	400	U	400	41	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	400	U	400	36	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,2,4-Trichlorobenzene	400	U	400	41	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,2-Dichlorobenzene	400	U	400	28	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,3-Dichlorobenzene	400	U	400	60	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
1,4-Dichlorobenzene	400	U	400	43	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Trichlorofluoromethane	400	U	400	54	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Chlorodibromomethane	400	U	400	54	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Methylcyclohexane	790	U	790	58	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1
Naphthalene	400	U	400	32	ug/Kg	☼	07/24/17 11:39	07/25/17 20:11	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-04

Lab Sample ID: 240-82670-1

Date Collected: 07/20/17 10:45

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 99.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	136		64 - 144	07/24/17 11:39	07/25/17 20:11	1
4-Bromofluorobenzene (Surr)	148	X	58 - 142	07/24/17 11:39	07/25/17 20:11	1
Toluene-d8 (Surr)	120		61 - 137	07/24/17 11:39	07/25/17 20:11	1
Dibromofluoromethane (Surr)	119		31 - 155	07/24/17 11:39	07/25/17 20:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	99.7		0.1	0.1	%			07/21/17 15:53	1
Percent Moisture	0.3		0.1	0.1	%			07/21/17 15:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-05

Lab Sample ID: 240-82670-2

Date Collected: 07/20/17 10:45

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 99.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25		24	3.7	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Benzene	6.1	U	6.1	0.39	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Dichlorobromomethane	6.1	U	6.1	0.40	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Bromoform	6.1	U	6.1	0.48	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Bromomethane	6.1	U	6.1	0.71	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
2-Butanone (MEK)	3.2	J	24	1.5	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Carbon disulfide	6.1	U	6.1	0.25	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Carbon tetrachloride	6.1	U	6.1	0.30	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Chlorobenzene	6.1	U	6.1	0.40	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Chloroethane	6.1	U	6.1	0.46	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Chloroform	6.1	U	6.1	0.28	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Chloromethane	6.1	U	6.1	0.46	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,1-Dichloroethane	6.1	U	6.1	0.40	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,2-Dichloroethane	6.1	U	6.1	0.35	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,1-Dichloroethene	6.1	U	6.1	0.65	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,2-Dichloropropane	6.1	U	6.1	0.38	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
cis-1,3-Dichloropropene	6.1	U	6.1	0.31	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
trans-1,3-Dichloropropene	6.1	U	6.1	0.25	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Ethylbenzene	6.1	U	6.1	0.33	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
2-Hexanone	24	U	24	0.70	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Methylene Chloride	4.6	J B	6.1	0.29	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
4-Methyl-2-pentanone (MIBK)	1.2	J	24	1.1	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Styrene	6.1	U	6.1	0.33	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,1,2,2-Tetrachloroethane	6.1	U *	6.1	0.31	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Tetrachloroethene	0.86	J	6.1	0.45	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Toluene	0.51	J	6.1	0.41	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Trichloroethene	6.1	U	6.1	0.50	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Vinyl chloride	6.1	U	6.1	0.34	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Xylenes, Total	1.5	J	12	0.48	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,1,1-Trichloroethane	6.1	U	6.1	0.28	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,1,2-Trichloroethane	6.1	U	6.1	0.47	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Cyclohexane	12	U	12	0.25	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,2-Dibromo-3-Chloropropane	12	U	12	0.82	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Ethylene Dibromide	6.1	U	6.1	0.42	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Dichlorodifluoromethane	6.1	U	6.1	0.42	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
cis-1,2-Dichloroethene	6.1	U	6.1	0.34	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
trans-1,2-Dichloroethene	6.1	U	6.1	0.46	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Isopropylbenzene	6.1	U	6.1	0.24	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Methyl acetate	30	U	30	1.4	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Methyl tert-butyl ether	6.1	U	6.1	0.33	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	6.1	U	6.1	0.59	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,2,4-Trichlorobenzene	6.1	U	6.1	0.29	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,2-Dichlorobenzene	6.1	U	6.1	0.27	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,3-Dichlorobenzene	6.1	U	6.1	0.35	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
1,4-Dichlorobenzene	6.1	U	6.1	0.42	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Trichlorofluoromethane	6.1	U	6.1	0.29	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Chlorodibromomethane	6.1	U	6.1	0.36	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Methylcyclohexane	12	U	12	0.28	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1
Naphthalene	2.3	J	6.1	0.40	ug/Kg	☼	07/21/17 16:55	07/25/17 18:23	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-05

Lab Sample ID: 240-82670-2

Date Collected: 07/20/17 10:45

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 99.7

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		61 - 127	07/21/17 16:55	07/25/17 18:23	1
4-Bromofluorobenzene (Surr)	87		61 - 132	07/21/17 16:55	07/25/17 18:23	1
Toluene-d8 (Surr)	73		66 - 125	07/21/17 16:55	07/25/17 18:23	1
Dibromofluoromethane (Surr)	75		43 - 131	07/21/17 16:55	07/25/17 18:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	99.7		0.1	0.1	%			07/21/17 15:53	1
Percent Moisture	0.3		0.1	0.1	%			07/21/17 15:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-06

Lab Sample ID: 240-82670-3

Date Collected: 07/20/17 11:20

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 97.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1000	U	1000	99	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Benzene	250	U	250	24	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Dichlorobromomethane	250	U	250	18	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Bromoform	250	U	250	23	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Bromomethane	250	U	250	29	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
2-Butanone (MEK)	1000	U	1000	51	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Carbon disulfide	250	U	250	18	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Carbon tetrachloride	250	U	250	27	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Chlorobenzene	250	U	250	31	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Chloroethane	250	U	250	29	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Chloroform	250	U	250	24	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Chloromethane	250	U	250	18	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,1-Dichloroethane	250	U	250	32	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,2-Dichloroethane	250	U	250	31	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,1-Dichloroethene	250	U	250	37	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,2-Dichloropropane	250	U	250	31	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
cis-1,3-Dichloropropene	250	U	250	23	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
trans-1,3-Dichloropropene	250	U	250	15	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Ethylbenzene	250	U	250	36	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
2-Hexanone	1000	U	1000	88	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Methylene Chloride	260	B	250	66	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
4-Methyl-2-pentanone (MIBK)	1000	U	1000	41	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Styrene	250	U	250	10	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,1,2,2-Tetrachloroethane	250	U	250	24	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Tetrachloroethene	1100		250	21	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Toluene	250	U	250	24	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Trichloroethene	250	U	250	38	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Vinyl chloride	250	U	250	17	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Xylenes, Total	510	U	510	29	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,1,1-Trichloroethane	250	U	250	29	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,1,2-Trichloroethane	250	U	250	23	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Cyclohexane	510	U	510	31	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,2-Dibromo-3-Chloropropane	510	U	510	49	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Ethylene Dibromide	250	U	250	23	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Dichlorodifluoromethane	250	U	250	22	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
cis-1,2-Dichloroethene	250	U	250	36	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
trans-1,2-Dichloroethene	250	U	250	36	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Isopropylbenzene	250	U	250	35	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Methyl acetate	1300	U	1300	76	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Methyl tert-butyl ether	250	U	250	26	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	23	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,2,4-Trichlorobenzene	250	U	250	26	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,2-Dichlorobenzene	250	U	250	18	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,3-Dichlorobenzene	250	U	250	39	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
1,4-Dichlorobenzene	250	U	250	27	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Trichlorofluoromethane	250	U	250	35	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Chlorodibromomethane	250	U	250	35	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Methylcyclohexane	510	U	510	38	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1
Naphthalene	250	U	250	20	ug/Kg	☼	07/24/17 11:39	07/25/17 20:32	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-06

Lab Sample ID: 240-82670-3

Date Collected: 07/20/17 11:20

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 97.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	117		64 - 144	07/24/17 11:39	07/25/17 20:32	1
4-Bromofluorobenzene (Surr)	127		58 - 142	07/24/17 11:39	07/25/17 20:32	1
Toluene-d8 (Surr)	103		61 - 137	07/24/17 11:39	07/25/17 20:32	1
Dibromofluoromethane (Surr)	101		31 - 155	07/24/17 11:39	07/25/17 20:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	97.0		0.1	0.1	%			07/21/17 15:53	1
Percent Moisture	3.0		0.1	0.1	%			07/21/17 15:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-07

Lab Sample ID: 240-82670-4

Date Collected: 07/20/17 11:20

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 98.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	7.5	J	16	2.5	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Benzene	4.1	U	4.1	0.26	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Dichlorobromomethane	4.1	U	4.1	0.27	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Bromoform	4.1	U	4.1	0.33	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Bromomethane	4.1	U	4.1	0.48	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
2-Butanone (MEK)	16	U	16	1.0	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Carbon disulfide	4.1	U	4.1	0.17	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Carbon tetrachloride	0.20	J	4.1	0.20	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Chlorobenzene	4.1	U	4.1	0.27	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Chloroethane	4.1	U	4.1	0.31	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Chloroform	4.1	U	4.1	0.19	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Chloromethane	4.1	U	4.1	0.31	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,1-Dichloroethane	4.1	U	4.1	0.27	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,2-Dichloroethane	4.1	U	4.1	0.24	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,1-Dichloroethene	4.1	U	4.1	0.44	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,2-Dichloropropane	4.1	U	4.1	0.25	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
cis-1,3-Dichloropropene	4.1	U	4.1	0.21	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
trans-1,3-Dichloropropene	4.1	U	4.1	0.17	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Ethylbenzene	4.1	U	4.1	0.22	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
2-Hexanone	16	U	16	0.48	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Methylene Chloride	2.4	J B	4.1	0.20	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
4-Methyl-2-pentanone (MIBK)	16	U	16	0.73	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Styrene	4.1	U	4.1	0.22	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,1,2,2-Tetrachloroethane	4.1	U *	4.1	0.21	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Tetrachloroethene	1.1	J	4.1	0.30	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Toluene	0.34	J	4.1	0.28	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Trichloroethene	4.1	U	4.1	0.34	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Vinyl chloride	4.1	U	4.1	0.23	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Xylenes, Total	8.2	U	8.2	0.33	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,1,1-Trichloroethane	4.1	U	4.1	0.19	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,1,2-Trichloroethane	4.1	U	4.1	0.32	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Cyclohexane	8.2	U	8.2	0.17	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,2-Dibromo-3-Chloropropane	8.2	U	8.2	0.56	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Ethylene Dibromide	4.1	U	4.1	0.29	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Dichlorodifluoromethane	4.1	U	4.1	0.29	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
cis-1,2-Dichloroethene	4.1	U	4.1	0.23	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
trans-1,2-Dichloroethene	4.1	U	4.1	0.31	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Isopropylbenzene	4.1	U	4.1	0.16	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Methyl acetate	20	U	20	0.96	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Methyl tert-butyl ether	4.1	U	4.1	0.22	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.1	U	4.1	0.40	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,2,4-Trichlorobenzene	4.1	U	4.1	0.20	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,2-Dichlorobenzene	4.1	U	4.1	0.18	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,3-Dichlorobenzene	4.1	U	4.1	0.24	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
1,4-Dichlorobenzene	4.1	U	4.1	0.29	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Trichlorofluoromethane	4.1	U	4.1	0.20	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Chlorodibromomethane	4.1	U	4.1	0.25	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Methylcyclohexane	8.2	U	8.2	0.19	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1
Naphthalene	4.1	U	4.1	0.27	ug/Kg	☼	07/21/17 16:55	07/25/17 18:45	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-07

Lab Sample ID: 240-82670-4

Date Collected: 07/20/17 11:20

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 98.2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		61 - 127	07/21/17 16:55	07/25/17 18:45	1
4-Bromofluorobenzene (Surr)	88		61 - 132	07/21/17 16:55	07/25/17 18:45	1
Toluene-d8 (Surr)	74		66 - 125	07/21/17 16:55	07/25/17 18:45	1
Dibromofluoromethane (Surr)	78		43 - 131	07/21/17 16:55	07/25/17 18:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	98.2		0.1	0.1	%			07/21/17 15:53	1
Percent Moisture	1.8		0.1	0.1	%			07/21/17 15:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-08

Lab Sample ID: 240-82670-5

Date Collected: 07/20/17 11:30

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 83.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4.1	J	18	2.8	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Benzene	4.5		4.5	0.29	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Dichlorobromomethane	4.5	U	4.5	0.30	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Bromoform	4.5	U	4.5	0.36	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Bromomethane	4.5	U	4.5	0.53	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
2-Butanone (MEK)	18	U	18	1.1	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Carbon disulfide	0.62	J	4.5	0.19	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Carbon tetrachloride	4.5	U	4.5	0.23	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Chlorobenzene	4.5	U	4.5	0.30	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Chloroethane	4.5	U	4.5	0.34	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Chloroform	4.5	U	4.5	0.21	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Chloromethane	4.5	U	4.5	0.34	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,1-Dichloroethane	4.5	U	4.5	0.30	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,2-Dichloroethane	4.5	U	4.5	0.26	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,1-Dichloroethene	1.1	J	4.5	0.49	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,2-Dichloropropane	4.5	U	4.5	0.28	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
cis-1,3-Dichloropropene	4.5	U	4.5	0.23	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
trans-1,3-Dichloropropene	4.5	U	4.5	0.19	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Ethylbenzene	4.5	U	4.5	0.24	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
2-Hexanone	18	U	18	0.52	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Methylene Chloride	3.1	J B	4.5	0.22	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
4-Methyl-2-pentanone (MIBK)	18	U	18	0.80	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Styrene	4.5	U	4.5	0.24	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,1,2,2-Tetrachloroethane	4.5	U *	4.5	0.23	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Tetrachloroethene	4.5	U	4.5	0.33	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Toluene	0.74	J	4.5	0.31	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Trichloroethene	0.63	J	4.5	0.37	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Vinyl chloride	8.8		4.5	0.25	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Xylenes, Total	3.3	J	9.0	0.36	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,1,1-Trichloroethane	4.5	U	4.5	0.21	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,1,2-Trichloroethane	4.5	U	4.5	0.35	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Cyclohexane	9.0	U	9.0	0.19	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,2-Dibromo-3-Chloropropane	9.0	U	9.0	0.61	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Ethylene Dibromide	4.5	U	4.5	0.32	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Dichlorodifluoromethane	4.5	U	4.5	0.32	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
cis-1,2-Dichloroethene	98		4.5	0.25	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
trans-1,2-Dichloroethene	14		4.5	0.34	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Isopropylbenzene	0.74	J	4.5	0.18	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Methyl acetate	23	U	23	1.1	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Methyl tert-butyl ether	4.5	U	4.5	0.24	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.5	U	4.5	0.44	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,2,4-Trichlorobenzene	4.5	U	4.5	0.22	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,2-Dichlorobenzene	4.5	U	4.5	0.20	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,3-Dichlorobenzene	4.5	U	4.5	0.26	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
1,4-Dichlorobenzene	4.5	U	4.5	0.32	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Trichlorofluoromethane	4.5	U	4.5	0.22	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Chlorodibromomethane	4.5	U	4.5	0.27	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Methylcyclohexane	1.6	J	9.0	0.21	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1
Naphthalene	6.2		4.5	0.30	ug/Kg	☼	07/21/17 16:55	07/25/17 19:06	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-08

Lab Sample ID: 240-82670-5

Date Collected: 07/20/17 11:30

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 83.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	77		61 - 127	07/21/17 16:55	07/25/17 19:06	1
4-Bromofluorobenzene (Surr)	106		61 - 132	07/21/17 16:55	07/25/17 19:06	1
Toluene-d8 (Surr)	85		66 - 125	07/21/17 16:55	07/25/17 19:06	1
Dibromofluoromethane (Surr)	78		43 - 131	07/21/17 16:55	07/25/17 19:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.4		0.1	0.1	%			07/21/17 15:53	1
Percent Moisture	16.6		0.1	0.1	%			07/21/17 15:53	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-09

Lab Sample ID: 240-82670-6

Date Collected: 07/20/17 13:40

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 88.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	920	U	920	89	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Benzene	230	U	230	22	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Dichlorobromomethane	230	U	230	17	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Bromoform	230	U	230	21	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Bromomethane	230	U	230	26	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
2-Butanone (MEK)	920	U	920	46	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Carbon disulfide	230	U	230	17	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Carbon tetrachloride	230	U	230	25	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Chlorobenzene	230	U	230	28	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Chloroethane	230	U	230	26	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Chloroform	230	U	230	22	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Chloromethane	230	U	230	17	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,1-Dichloroethane	230	U	230	28	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,2-Dichloroethane	230	U	230	28	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,1-Dichloroethene	230	U	230	33	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,2-Dichloropropane	230	U	230	28	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
cis-1,3-Dichloropropene	230	U	230	21	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
trans-1,3-Dichloropropene	230	U	230	14	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Ethylbenzene	230	U	230	32	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
2-Hexanone	920	U	920	79	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Methylene Chloride	250	B	230	60	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
4-Methyl-2-pentanone (MIBK)	920	U	920	37	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Styrene	230	U	230	9.2	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,1,2,2-Tetrachloroethane	230	U	230	22	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Tetrachloroethene	360		230	19	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Toluene	230	U	230	22	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Trichloroethene	230	U	230	34	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Vinyl chloride	230	U	230	16	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Xylenes, Total	460	U	460	26	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,1,1-Trichloroethane	230	U	230	26	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,1,2-Trichloroethane	230	U	230	21	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Cyclohexane	460	U	460	28	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,2-Dibromo-3-Chloropropane	460	U	460	44	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Ethylene Dibromide	230	U	230	21	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Dichlorodifluoromethane	230	U	230	20	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
cis-1,2-Dichloroethene	34	J	230	32	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
trans-1,2-Dichloroethene	230	U	230	32	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Isopropylbenzene	230	U	230	31	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Methyl acetate	1100	U	1100	69	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Methyl tert-butyl ether	230	U	230	24	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	230	U	230	21	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,2,4-Trichlorobenzene	230	U	230	24	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,2-Dichlorobenzene	230	U	230	17	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,3-Dichlorobenzene	230	U	230	35	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
1,4-Dichlorobenzene	230	U	230	25	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Trichlorofluoromethane	230	U	230	31	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Chlorodibromomethane	230	U	230	31	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Methylcyclohexane	460	U	460	34	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1
Naphthalene	230	U	230	18	ug/Kg	☼	07/24/17 14:10	07/25/17 21:36	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-09

Lab Sample ID: 240-82670-6

Date Collected: 07/20/17 13:40

Matrix: Solid

Date Received: 07/21/17 09:20

Percent Solids: 88.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		64 - 144	07/24/17 14:10	07/25/17 21:36	1
4-Bromofluorobenzene (Surr)	121		58 - 142	07/24/17 14:10	07/25/17 21:36	1
Toluene-d8 (Surr)	94		61 - 137	07/24/17 14:10	07/25/17 21:36	1
Dibromofluoromethane (Surr)	97		31 - 155	07/24/17 14:10	07/25/17 21:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.8		0.1	0.1	%			07/21/17 15:53	1
Percent Moisture	11.2		0.1	0.1	%			07/21/17 15:53	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (64-144)	BFB (58-142)	TOL (61-137)	DBFM (31-155)
240-82670-1	S-170720-RA-04	136	148 X	120	119
240-82670-3	S-170720-RA-06	117	127	103	101
240-82670-6	S-170720-RA-09	108	121	94	97
LCS 240-288418/2-A	Lab Control Sample	101	106	86	95
LCS 240-288461/2-A	Lab Control Sample	91	102	83	86
MB 240-288418/1-A	Method Blank	101	107	83	87
MB 240-288461/1-A	Method Blank	96	104	84	86

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (61-127)	BFB (61-132)	TOL (66-125)	DBFM (43-131)
240-82670-2	S-170720-RA-05	79	87	73	75
240-82670-4	S-170720-RA-07	80	88	74	78
240-82670-5	S-170720-RA-08	77	106	85	78
LCS 240-288594/5	Lab Control Sample	78	92	77	80
MB 240-288594/6	Method Blank	82	93	78	80

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-288418/1-A

Matrix: Solid

Analysis Batch: 288594

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 288418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1000	U	1000	97	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Benzene	250	U	250	24	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Dichlorobromomethane	250	U	250	18	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Bromoform	250	U	250	23	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Bromomethane	250	U	250	28	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
2-Butanone (MEK)	1000	U	1000	50	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Carbon disulfide	250	U	250	18	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Carbon tetrachloride	250	U	250	27	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Chlorobenzene	250	U	250	30	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Chloroethane	250	U	250	28	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Chloroform	250	U	250	24	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Chloromethane	250	U	250	18	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,1-Dichloroethane	250	U	250	31	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,2-Dichloroethane	250	U	250	30	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,1-Dichloroethene	250	U	250	36	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,2-Dichloropropane	250	U	250	30	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
cis-1,3-Dichloropropene	250	U	250	23	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
trans-1,3-Dichloropropene	250	U	250	15	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Ethylbenzene	250	U	250	35	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
2-Hexanone	1000	U	1000	86	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Methylene Chloride	265		250	65	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
4-Methyl-2-pentanone (MIBK)	1000	U	1000	40	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Styrene	250	U	250	10	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,1,2,2-Tetrachloroethane	250	U	250	24	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Tetrachloroethene	250	U	250	21	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Toluene	250	U	250	24	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Trichloroethene	250	U	250	37	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Vinyl chloride	250	U	250	17	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Xylenes, Total	500	U	500	28	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,1,1-Trichloroethane	250	U	250	28	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,1,2-Trichloroethane	250	U	250	23	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Cyclohexane	500	U	500	30	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,2-Dibromo-3-Chloropropane	500	U	500	48	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Ethylene Dibromide	250	U	250	23	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Dichlorodifluoromethane	250	U	250	22	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
cis-1,2-Dichloroethene	250	U	250	35	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
trans-1,2-Dichloroethene	250	U	250	35	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Isopropylbenzene	250	U	250	34	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Methyl acetate	1300	U	1300	75	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Methyl tert-butyl ether	250	U	250	26	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	23	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,2,4-Trichlorobenzene	250	U	250	26	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,2-Dichlorobenzene	250	U	250	18	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,3-Dichlorobenzene	250	U	250	38	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
1,4-Dichlorobenzene	250	U	250	27	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Trichlorofluoromethane	250	U	250	34	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Chlorodibromomethane	250	U	250	34	ug/Kg		07/24/17 11:39	07/25/17 19:49	1
Methylcyclohexane	500	U	500	37	ug/Kg		07/24/17 11:39	07/25/17 19:49	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288418/1-A
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	250	U	250	20	ug/Kg		07/24/17 11:39	07/25/17 19:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		64 - 144	07/24/17 11:39	07/25/17 19:49	1
4-Bromofluorobenzene (Surr)	107		58 - 142	07/24/17 11:39	07/25/17 19:49	1
Toluene-d8 (Surr)	83		61 - 137	07/24/17 11:39	07/25/17 19:49	1
Dibromofluoromethane (Surr)	87		31 - 155	07/24/17 11:39	07/25/17 19:49	1

Lab Sample ID: LCS 240-288418/2-A
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acetone	2000	1740		ug/Kg		87	24 - 125
Benzene	1000	970		ug/Kg		97	77 - 120
Dichlorobromomethane	1000	896		ug/Kg		90	61 - 132
Bromoform	1000	758		ug/Kg		76	40 - 140
Bromomethane	1000	398		ug/Kg		40	10 - 153
2-Butanone (MEK)	2000	1860		ug/Kg		93	51 - 120
Carbon disulfide	1000	593		ug/Kg		59	17 - 163
Carbon tetrachloride	1000	811		ug/Kg		81	43 - 144
Chlorobenzene	1000	962		ug/Kg		96	76 - 120
Chloroethane	1000	230	J	ug/Kg		23	10 - 166
Chloroform	1000	934		ug/Kg		93	74 - 120
Chloromethane	1000	828		ug/Kg		83	41 - 124
1,1-Dichloroethane	1000	989		ug/Kg		99	72 - 120
1,2-Dichloroethane	1000	932		ug/Kg		93	71 - 120
1,1-Dichloroethene	1000	662		ug/Kg		66	58 - 130
1,2-Dichloropropane	1000	1100		ug/Kg		110	78 - 122
cis-1,3-Dichloropropene	1000	985		ug/Kg		98	66 - 126
trans-1,3-Dichloropropene	1000	842		ug/Kg		84	55 - 121
Ethylbenzene	1000	924		ug/Kg		92	76 - 120
2-Hexanone	2000	2140		ug/Kg		107	52 - 129
Methylene Chloride	1000	1220		ug/Kg		122	64 - 126
4-Methyl-2-pentanone (MIBK)	2000	1950		ug/Kg		98	65 - 131
Styrene	1000	902		ug/Kg		90	80 - 120
1,1,2,2-Tetrachloroethane	1000	1180		ug/Kg		118	78 - 120
Tetrachloroethene	1000	847		ug/Kg		85	68 - 122
Toluene	1000	918		ug/Kg		92	74 - 120
Trichloroethene	1000	764		ug/Kg		76	73 - 123
Vinyl chloride	1000	815		ug/Kg		82	49 - 131
Xylenes, Total	2000	1940		ug/Kg		97	78 - 120
1,1,1-Trichloroethane	1000	903		ug/Kg		90	60 - 136
1,1,2-Trichloroethane	1000	963		ug/Kg		96	80 - 120
Cyclohexane	1000	1030		ug/Kg		103	66 - 129
1,2-Dibromo-3-Chloropropane	1000	1000		ug/Kg		100	40 - 133
Ethylene Dibromide	1000	939		ug/Kg		94	80 - 120
Dichlorodifluoromethane	1000	555		ug/Kg		55	15 - 127

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288418/2-A
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	1000	913		ug/Kg		91	78 - 120
trans-1,2-Dichloroethene	1000	910		ug/Kg		91	74 - 124
Isopropylbenzene	1000	1000		ug/Kg		100	76 - 124
Methyl acetate	2000	1980		ug/Kg		99	63 - 126
Methyl tert-butyl ether	1000	1010		ug/Kg		101	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	748		ug/Kg		75	64 - 125
1,2,4-Trichlorobenzene	1000	864		ug/Kg		86	60 - 124
1,2-Dichlorobenzene	1000	942		ug/Kg		94	75 - 120
1,3-Dichlorobenzene	1000	924		ug/Kg		92	72 - 120
1,4-Dichlorobenzene	1000	925		ug/Kg		93	71 - 120
Trichlorofluoromethane	1000	644		ug/Kg		64	28 - 152
Chlorodibromomethane	1000	777		ug/Kg		78	46 - 125
Methylcyclohexane	1000	945		ug/Kg		95	71 - 126
m-Xylene & p-Xylene	1000	960		ug/Kg		96	78 - 120
o-Xylene	1000	981		ug/Kg		98	77 - 120
Naphthalene	1000	877		ug/Kg		88	68 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		64 - 144
4-Bromofluorobenzene (Surr)	106		58 - 142
Toluene-d8 (Surr)	86		61 - 137
Dibromofluoromethane (Surr)	95		31 - 155

Lab Sample ID: MB 240-288461/1-A
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288461

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1000	U	1000	97	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Benzene	250	U	250	24	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Dichlorobromomethane	250	U	250	18	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Bromoform	250	U	250	23	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Bromomethane	250	U	250	28	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
2-Butanone (MEK)	1000	U	1000	50	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Carbon disulfide	250	U	250	18	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Carbon tetrachloride	250	U	250	27	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Chlorobenzene	250	U	250	30	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Chloroethane	250	U	250	28	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Chloroform	250	U	250	24	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Chloromethane	250	U	250	18	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1-Dichloroethane	250	U	250	31	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,2-Dichloroethane	250	U	250	30	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1-Dichloroethene	250	U	250	36	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,2-Dichloropropane	250	U	250	30	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
cis-1,3-Dichloropropene	250	U	250	23	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
trans-1,3-Dichloropropene	250	U	250	15	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Ethylbenzene	250	U	250	35	ug/Kg		07/24/17 14:10	07/25/17 21:15	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288461/1-A
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288461

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	1000	U	1000	86	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Methylene Chloride	282		250	65	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
4-Methyl-2-pentanone (MIBK)	1000	U	1000	40	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Styrene	250	U	250	10	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1,2,2-Tetrachloroethane	250	U	250	24	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Tetrachloroethene	250	U	250	21	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Toluene	250	U	250	24	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Trichloroethene	250	U	250	37	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Vinyl chloride	250	U	250	17	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Xylenes, Total	500	U	500	28	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1,1-Trichloroethane	250	U	250	28	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1,2-Trichloroethane	250	U	250	23	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Cyclohexane	500	U	500	30	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,2-Dibromo-3-Chloropropane	500	U	500	48	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Ethylene Dibromide	250	U	250	23	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Dichlorodifluoromethane	250	U	250	22	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
cis-1,2-Dichloroethene	250	U	250	35	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
trans-1,2-Dichloroethene	250	U	250	35	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Isopropylbenzene	250	U	250	34	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Methyl acetate	1300	U	1300	75	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Methyl tert-butyl ether	250	U	250	26	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	23	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,2,4-Trichlorobenzene	250	U	250	26	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,2-Dichlorobenzene	250	U	250	18	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,3-Dichlorobenzene	250	U	250	38	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,4-Dichlorobenzene	250	U	250	27	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Trichlorofluoromethane	250	U	250	34	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Chlorodibromomethane	250	U	250	34	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Methylcyclohexane	500	U	500	37	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Naphthalene	250	U	250	20	ug/Kg		07/24/17 14:10	07/25/17 21:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 144	07/24/17 14:10	07/25/17 21:15	1
4-Bromofluorobenzene (Surr)	104		58 - 142	07/24/17 14:10	07/25/17 21:15	1
Toluene-d8 (Surr)	84		61 - 137	07/24/17 14:10	07/25/17 21:15	1
Dibromofluoromethane (Surr)	86		31 - 155	07/24/17 14:10	07/25/17 21:15	1

Lab Sample ID: LCS 240-288461/2-A
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288461

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acetone	2000	1220		ug/Kg		61	24 - 125
Benzene	1000	929		ug/Kg		93	77 - 120
Dichlorobromomethane	1000	848		ug/Kg		85	61 - 132
Bromoform	1000	691		ug/Kg		69	40 - 140
Bromomethane	1000	334		ug/Kg		33	10 - 153
2-Butanone (MEK)	2000	1460		ug/Kg		73	51 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288461/2-A
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288461
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Carbon disulfide	1000	598		ug/Kg		60	17 - 163
Carbon tetrachloride	1000	795		ug/Kg		79	43 - 144
Chlorobenzene	1000	924		ug/Kg		92	76 - 120
Chloroethane	1000	224	J	ug/Kg		22	10 - 166
Chloroform	1000	888		ug/Kg		89	74 - 120
Chloromethane	1000	800		ug/Kg		80	41 - 124
1,1-Dichloroethane	1000	954		ug/Kg		95	72 - 120
1,2-Dichloroethane	1000	872		ug/Kg		87	71 - 120
1,1-Dichloroethene	1000	648		ug/Kg		65	58 - 130
1,2-Dichloropropane	1000	1030		ug/Kg		103	78 - 122
cis-1,3-Dichloropropene	1000	923		ug/Kg		92	66 - 126
trans-1,3-Dichloropropene	1000	795		ug/Kg		80	55 - 121
Ethylbenzene	1000	912		ug/Kg		91	76 - 120
2-Hexanone	2000	1720		ug/Kg		86	52 - 129
Methylene Chloride	1000	1150		ug/Kg		115	64 - 126
4-Methyl-2-pentanone (MIBK)	2000	1600		ug/Kg		80	65 - 131
Styrene	1000	863		ug/Kg		86	80 - 120
1,1,2,2-Tetrachloroethane	1000	1090		ug/Kg		109	78 - 120
Tetrachloroethene	1000	834		ug/Kg		83	68 - 122
Toluene	1000	900		ug/Kg		90	74 - 120
Trichloroethene	1000	734		ug/Kg		73	73 - 123
Vinyl chloride	1000	754		ug/Kg		75	49 - 131
Xylenes, Total	2000	1880		ug/Kg		94	78 - 120
1,1,1-Trichloroethane	1000	882		ug/Kg		88	60 - 136
1,1,2-Trichloroethane	1000	878		ug/Kg		88	80 - 120
Cyclohexane	1000	975		ug/Kg		97	66 - 129
1,2-Dibromo-3-Chloropropane	1000	800		ug/Kg		80	40 - 133
Ethylene Dibromide	1000	825		ug/Kg		83	80 - 120
Dichlorodifluoromethane	1000	636		ug/Kg		64	15 - 127
cis-1,2-Dichloroethene	1000	872		ug/Kg		87	78 - 120
trans-1,2-Dichloroethene	1000	881		ug/Kg		88	74 - 124
Isopropylbenzene	1000	950		ug/Kg		95	76 - 124
Methyl acetate	2000	1640		ug/Kg		82	63 - 126
Methyl tert-butyl ether	1000	909		ug/Kg		91	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	682		ug/Kg		68	64 - 125
1,2,4-Trichlorobenzene	1000	782		ug/Kg		78	60 - 124
1,2-Dichlorobenzene	1000	905		ug/Kg		90	75 - 120
1,3-Dichlorobenzene	1000	896		ug/Kg		90	72 - 120
1,4-Dichlorobenzene	1000	873		ug/Kg		87	71 - 120
Trichlorofluoromethane	1000	630		ug/Kg		63	28 - 152
Chlorodibromomethane	1000	728		ug/Kg		73	46 - 125
Methylcyclohexane	1000	926		ug/Kg		93	71 - 126
m-Xylene & p-Xylene	1000	933		ug/Kg		93	78 - 120
o-Xylene	1000	946		ug/Kg		95	77 - 120
Naphthalene	1000	739		ug/Kg		74	68 - 123

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288461/2-A
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288461

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		64 - 144
4-Bromofluorobenzene (Surr)	102		58 - 142
Toluene-d8 (Surr)	83		61 - 137
Dibromofluoromethane (Surr)	86		31 - 155

Lab Sample ID: MB 240-288594/6
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20	U	20	3.1	ug/Kg			07/25/17 13:23	1
Benzene	5.0	U	5.0	0.32	ug/Kg			07/25/17 13:23	1
Dichlorobromomethane	5.0	U	5.0	0.33	ug/Kg			07/25/17 13:23	1
Bromoform	3.67	J	5.0	0.40	ug/Kg			07/25/17 13:23	1
Bromomethane	5.0	U	5.0	0.59	ug/Kg			07/25/17 13:23	1
2-Butanone (MEK)	20	U	20	1.3	ug/Kg			07/25/17 13:23	1
Carbon disulfide	5.0	U	5.0	0.21	ug/Kg			07/25/17 13:23	1
Carbon tetrachloride	5.0	U	5.0	0.25	ug/Kg			07/25/17 13:23	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			07/25/17 13:23	1
Chloroethane	5.0	U	5.0	0.38	ug/Kg			07/25/17 13:23	1
Chloroform	5.0	U	5.0	0.23	ug/Kg			07/25/17 13:23	1
Chloromethane	5.0	U	5.0	0.38	ug/Kg			07/25/17 13:23	1
1,1-Dichloroethane	5.0	U	5.0	0.33	ug/Kg			07/25/17 13:23	1
1,2-Dichloroethane	5.0	U	5.0	0.29	ug/Kg			07/25/17 13:23	1
1,1-Dichloroethene	5.0	U	5.0	0.54	ug/Kg			07/25/17 13:23	1
1,2-Dichloropropane	5.0	U	5.0	0.31	ug/Kg			07/25/17 13:23	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.26	ug/Kg			07/25/17 13:23	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.21	ug/Kg			07/25/17 13:23	1
Ethylbenzene	5.0	U	5.0	0.27	ug/Kg			07/25/17 13:23	1
2-Hexanone	20	U	20	0.58	ug/Kg			07/25/17 13:23	1
Methylene Chloride	5.08		5.0	0.24	ug/Kg			07/25/17 13:23	1
4-Methyl-2-pentanone (MIBK)	20	U	20	0.89	ug/Kg			07/25/17 13:23	1
Styrene	5.0	U	5.0	0.27	ug/Kg			07/25/17 13:23	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.26	ug/Kg			07/25/17 13:23	1
Tetrachloroethene	5.0	U	5.0	0.37	ug/Kg			07/25/17 13:23	1
Toluene	5.0	U	5.0	0.34	ug/Kg			07/25/17 13:23	1
Trichloroethene	5.0	U	5.0	0.41	ug/Kg			07/25/17 13:23	1
Vinyl chloride	5.0	U	5.0	0.28	ug/Kg			07/25/17 13:23	1
Xylenes, Total	10	U	10	0.40	ug/Kg			07/25/17 13:23	1
1,1,1-Trichloroethane	5.0	U	5.0	0.23	ug/Kg			07/25/17 13:23	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			07/25/17 13:23	1
Cyclohexane	10	U	10	0.21	ug/Kg			07/25/17 13:23	1
1,2-Dibromo-3-Chloropropane	10	U	10	0.68	ug/Kg			07/25/17 13:23	1
Ethylene Dibromide	5.0	U	5.0	0.35	ug/Kg			07/25/17 13:23	1
Dichlorodifluoromethane	5.0	U	5.0	0.35	ug/Kg			07/25/17 13:23	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.28	ug/Kg			07/25/17 13:23	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.38	ug/Kg			07/25/17 13:23	1
Isopropylbenzene	5.0	U	5.0	0.20	ug/Kg			07/25/17 13:23	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288594/6
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	25	U	25	1.2	ug/Kg			07/25/17 13:23	1
Methyl tert-butyl ether	5.0	U	5.0	0.27	ug/Kg			07/25/17 13:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	0.49	ug/Kg			07/25/17 13:23	1
1,2,4-Trichlorobenzene	5.0	U	5.0	0.24	ug/Kg			07/25/17 13:23	1
1,2-Dichlorobenzene	5.0	U	5.0	0.22	ug/Kg			07/25/17 13:23	1
1,3-Dichlorobenzene	5.0	U	5.0	0.29	ug/Kg			07/25/17 13:23	1
1,4-Dichlorobenzene	5.0	U	5.0	0.35	ug/Kg			07/25/17 13:23	1
Trichlorofluoromethane	5.0	U	5.0	0.24	ug/Kg			07/25/17 13:23	1
Chlorodibromomethane	5.0	U	5.0	0.30	ug/Kg			07/25/17 13:23	1
Methylcyclohexane	10	U	10	0.23	ug/Kg			07/25/17 13:23	1
Naphthalene	5.0	U	5.0	0.33	ug/Kg			07/25/17 13:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		61 - 127		07/25/17 13:23	1
4-Bromofluorobenzene (Surr)	93		61 - 132		07/25/17 13:23	1
Toluene-d8 (Surr)	78		66 - 125		07/25/17 13:23	1
Dibromofluoromethane (Surr)	80		43 - 131		07/25/17 13:23	1

Lab Sample ID: LCS 240-288594/5
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	90.3		ug/Kg		90	24 - 125
Benzene	50.0	52.7		ug/Kg		105	77 - 120
Dichlorobromomethane	50.0	54.4		ug/Kg		109	61 - 132
Bromoform	50.0	43.1		ug/Kg		86	40 - 140
Bromomethane	20.0	16.7		ug/Kg		84	10 - 153
2-Butanone (MEK)	100	90.1		ug/Kg		90	51 - 120
Carbon disulfide	50.0	48.9		ug/Kg		98	17 - 163
Carbon tetrachloride	50.0	55.0		ug/Kg		110	43 - 144
Chlorobenzene	50.0	49.8		ug/Kg		100	76 - 120
Chloroethane	20.0	16.6		ug/Kg		83	10 - 166
Chloroform	50.0	51.0		ug/Kg		102	74 - 120
Chloromethane	20.0	21.7		ug/Kg		109	41 - 124
1,1-Dichloroethane	50.0	55.0		ug/Kg		110	72 - 120
1,2-Dichloroethane	50.0	47.7		ug/Kg		95	71 - 120
1,1-Dichloroethene	50.0	41.1		ug/Kg		82	58 - 130
1,2-Dichloropropane	50.0	58.7		ug/Kg		117	78 - 122
cis-1,3-Dichloropropene	50.0	58.7		ug/Kg		117	66 - 126
trans-1,3-Dichloropropene	50.0	45.3		ug/Kg		91	55 - 121
Ethylbenzene	50.0	53.6		ug/Kg		107	76 - 120
2-Hexanone	100	112		ug/Kg		112	52 - 129
Methylene Chloride	50.0	60.9		ug/Kg		122	64 - 126
4-Methyl-2-pentanone (MIBK)	100	104		ug/Kg		104	65 - 131
Styrene	50.0	50.7		ug/Kg		101	80 - 120
1,1,2,2-Tetrachloroethane	50.0	66.2	*	ug/Kg		132	78 - 120
Tetrachloroethene	50.0	51.3		ug/Kg		103	68 - 122

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288594/5

Matrix: Solid

Analysis Batch: 288594

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	50.0	50.1		ug/Kg		100	74 - 120
Trichloroethene	50.0	44.5		ug/Kg		89	73 - 123
Vinyl chloride	20.0	20.0		ug/Kg		100	49 - 131
Xylenes, Total	100	108		ug/Kg		108	78 - 120
1,1,1-Trichloroethane	50.0	57.6		ug/Kg		115	60 - 136
1,1,2-Trichloroethane	50.0	49.4		ug/Kg		99	80 - 120
Cyclohexane	50.0	64.7		ug/Kg		129	66 - 129
1,2-Dibromo-3-Chloropropane	50.0	53.6		ug/Kg		107	40 - 133
Ethylene Dibromide	50.0	49.8		ug/Kg		100	80 - 120
Dichlorodifluoromethane	20.0	25.0		ug/Kg		125	15 - 127
cis-1,2-Dichloroethene	50.0	50.9		ug/Kg		102	78 - 120
trans-1,2-Dichloroethene	50.0	54.3		ug/Kg		109	74 - 124
Isopropylbenzene	50.0	57.2		ug/Kg		114	76 - 124
Methyl acetate	100	117		ug/Kg		117	63 - 126
Methyl tert-butyl ether	50.0	53.1		ug/Kg		106	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	40.4		ug/Kg		81	64 - 125
1,2,4-Trichlorobenzene	50.0	48.0		ug/Kg		96	60 - 124
1,2-Dichlorobenzene	50.0	50.1		ug/Kg		100	75 - 120
1,3-Dichlorobenzene	50.0	51.7		ug/Kg		103	72 - 120
1,4-Dichlorobenzene	50.0	50.3		ug/Kg		101	71 - 120
Trichlorofluoromethane	20.0	17.6		ug/Kg		88	28 - 152
Chlorodibromomethane	50.0	43.1		ug/Kg		86	46 - 125
Methylcyclohexane	50.0	62.2		ug/Kg		124	71 - 126
m-Xylene & p-Xylene	50.0	54.6		ug/Kg		109	78 - 120
o-Xylene	50.0	53.8		ug/Kg		108	77 - 120
Naphthalene	50.0	48.7		ug/Kg		97	68 - 123

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	78		61 - 127
4-Bromofluorobenzene (Surr)	92		61 - 132
Toluene-d8 (Surr)	77		66 - 125
Dibromofluoromethane (Surr)	80		43 - 131

QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

GC/MS VOA

Prep Batch: 288418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82670-1	S-170720-RA-04	Total/NA	Solid	5035	
240-82670-3	S-170720-RA-06	Total/NA	Solid	5035	
MB 240-288418/1-A	Method Blank	Total/NA	Solid	5035	
LCS 240-288418/2-A	Lab Control Sample	Total/NA	Solid	5035	

Prep Batch: 288461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82670-6	S-170720-RA-09	Total/NA	Solid	5035	
MB 240-288461/1-A	Method Blank	Total/NA	Solid	5035	
LCS 240-288461/2-A	Lab Control Sample	Total/NA	Solid	5035	

Prep Batch: 288478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82670-2	S-170720-RA-05	Total/NA	Solid	5035	
240-82670-4	S-170720-RA-07	Total/NA	Solid	5035	
240-82670-5	S-170720-RA-08	Total/NA	Solid	5035	

Analysis Batch: 288594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82670-1	S-170720-RA-04	Total/NA	Solid	8260B	288418
240-82670-2	S-170720-RA-05	Total/NA	Solid	8260B	288478
240-82670-3	S-170720-RA-06	Total/NA	Solid	8260B	288418
240-82670-4	S-170720-RA-07	Total/NA	Solid	8260B	288478
240-82670-5	S-170720-RA-08	Total/NA	Solid	8260B	288478
240-82670-6	S-170720-RA-09	Total/NA	Solid	8260B	288461
MB 240-288418/1-A	Method Blank	Total/NA	Solid	8260B	288418
MB 240-288461/1-A	Method Blank	Total/NA	Solid	8260B	288461
MB 240-288594/6	Method Blank	Total/NA	Solid	8260B	
LCS 240-288418/2-A	Lab Control Sample	Total/NA	Solid	8260B	288418
LCS 240-288461/2-A	Lab Control Sample	Total/NA	Solid	8260B	288461
LCS 240-288594/5	Lab Control Sample	Total/NA	Solid	8260B	

General Chemistry

Analysis Batch: 288150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82670-1	S-170720-RA-04	Total/NA	Solid	Moisture	
240-82670-2	S-170720-RA-05	Total/NA	Solid	Moisture	
240-82670-3	S-170720-RA-06	Total/NA	Solid	Moisture	
240-82670-4	S-170720-RA-07	Total/NA	Solid	Moisture	
240-82670-5	S-170720-RA-08	Total/NA	Solid	Moisture	
240-82670-6	S-170720-RA-09	Total/NA	Solid	Moisture	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-04

Date Collected: 07/20/17 10:45

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	288150	07/21/17 15:53	PW	TAL CAN

Client Sample ID: S-170720-RA-04

Date Collected: 07/20/17 10:45

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-1

Matrix: Solid

Percent Solids: 99.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			288418	07/24/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	288594	07/25/17 20:11	SAM	TAL CAN

Client Sample ID: S-170720-RA-05

Date Collected: 07/20/17 10:45

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	288150	07/21/17 15:53	PW	TAL CAN

Client Sample ID: S-170720-RA-05

Date Collected: 07/20/17 10:45

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-2

Matrix: Solid

Percent Solids: 99.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			288478	07/21/17 16:55	LAM	TAL CAN
Total/NA	Analysis	8260B		1	288594	07/25/17 18:23	SAM	TAL CAN

Client Sample ID: S-170720-RA-06

Date Collected: 07/20/17 11:20

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	288150	07/21/17 15:53	PW	TAL CAN

Client Sample ID: S-170720-RA-06

Date Collected: 07/20/17 11:20

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-3

Matrix: Solid

Percent Solids: 97.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			288418	07/24/17 11:39	LAM	TAL CAN
Total/NA	Analysis	8260B		1	288594	07/25/17 20:32	SAM	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82670-1

Client Sample ID: S-170720-RA-07

Date Collected: 07/20/17 11:20

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	288150	07/21/17 15:53	PW	TAL CAN

Client Sample ID: S-170720-RA-07

Date Collected: 07/20/17 11:20

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-4

Matrix: Solid

Percent Solids: 98.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			288478	07/21/17 16:55	LAM	TAL CAN
Total/NA	Analysis	8260B		1	288594	07/25/17 18:45	SAM	TAL CAN

Client Sample ID: S-170720-RA-08

Date Collected: 07/20/17 11:30

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	288150	07/21/17 15:53	PW	TAL CAN

Client Sample ID: S-170720-RA-08

Date Collected: 07/20/17 11:30

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-5

Matrix: Solid

Percent Solids: 83.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			288478	07/21/17 16:55	LAM	TAL CAN
Total/NA	Analysis	8260B		1	288594	07/25/17 19:06	SAM	TAL CAN

Client Sample ID: S-170720-RA-09

Date Collected: 07/20/17 13:40

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	288150	07/21/17 15:53	PW	TAL CAN

Client Sample ID: S-170720-RA-09

Date Collected: 07/20/17 13:40

Date Received: 07/21/17 09:20

Lab Sample ID: 240-82670-6

Matrix: Solid

Percent Solids: 88.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			288461	07/24/17 14:10	LAM	TAL CAN
Total/NA	Analysis	8260B		1	288594	07/25/17 21:36	SAM	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TestAmerica Canton



CONESTOGA-ROVERS & ASSOCIATES

CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States
Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: SP-02426

PAGE ___ OF ___

(See Reverse Side for Instructions)

Project No/Phase/Task Code: 87751		Laboratory Name: Test America		Lab Location:		SSOW ID:									
Project Name: 6714 Walker St		Lab Contact:		Lab Quote No:		Cooler No:									
Project Location: SLP		Container Quantity & Preservation		Analysis Requested (See Back of COC for Definitions)		Carrier:									
Chemistry Contact: G. Anderson		Sample Type		MS/MSD Request		Airbill No:									
Sampler(s): Damon K Serbin		Matrix Code		Date Shipped:		COMMENTS/ SPECIAL INSTRUCTIONS:									
Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)	DATE (mm/dd/yyyy)	TIME (hh:mm)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	Encores 3x5-g, 1x25-g	Other:	Total Containers/Sample			
1	S-170720-PA-04	7/20/17	1:45	↓	↓	↓	↓	↓	↓	↓	↓	3			
2	S-170720-PA-05	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	3			
3	S-170720-PA-06	↓	11:20	↓	↓	↓	↓	↓	↓	↓	↓	3			
	S-170720-PA-07	↓	11:20	↓	↓	↓	↓	↓	↓	↓	↓	3			
	S-170720-PA-08	↓	11:30	↓	↓	↓	↓	↓	↓	↓	↓	3			
	S-170720-PA-09	↓	1:30	↓	↓	↓	↓	↓	↓	↓	↓	3			
Total Number of Containers: _____															
Notes/ Special Requirements:															
All Samples in Cooler must be on COC															
RELINQUISHED BY		COMPANY		DATE		TIME		RECEIVED BY		COMPANY		DATE		TIME	
[Signature]		CRA		7/20/17				[Signature]		TA		7/21/17		9:20	



THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE - Fully Executed Copy (CRA)

YELLOW - Receiving Laboratory Copy

PINK - Shipper

GOLDENROD - Sampling Crew

CRA Form: COC-10A (20110804)



TestAmerica Canton Sample Receipt Form/Narrative

Login #: 82670

Canton Facility

Client CRA

Site Name

Cooler unpacked by:

Cooler Received on 7/2/17

Opened on 7/2/17

[Signature]

FedEx: 1st Grd UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

See Multiple Cooler Form

1. Cooler temperature upon receipt
IR GUN# IR-8 (CF -0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #36 (CF +0°C) Observed Cooler Temp. 5.1 °C Corrected Cooler Temp. 5.1 °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No

-Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA

-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels be reconciled with the COC? Yes No

9. Were correct bottle(s) used for the test(s) indicated? Yes No

10. Sufficient quantity received to perform indicated analyses? Yes No

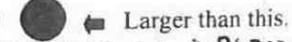
11. Are these work share samples? Yes No

If yes, Questions 11-15 have been checked at the originating laboratory.

11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC697954

12. Were VOAs on the COC? Yes No

13. Were air bubbles >6 mm in any VOA vials? Yes No NA



14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot# ~~0630-0107~~ Yes No NA DSD 7/2/17

15. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Blank lines for Chain of Custody and Sample Discrepancies.

17. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-82739-1

Client Project/Site: 88751, Hinshawn & Culbertson

For:

GHD Services Inc.

1801 Old Highway 8 NW

Suite 114

St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson



Authorized for release by:

8/3/2017 2:03:18 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Job ID: 240-82739-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-82739-1

Comments

No additional comments.

Receipt

The samples were received on 7/22/2017 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5° C.

GC/MS VOA

Method(s) 8260B: Surrogate recovery for the following sample was outside of acceptance limits: S-170720-RA-11 (240-82739-2). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-288461 and analytical batch 240-288921.

Method(s) 8260B: The following sample was preserved via freezing on 7-22-2017 at 15:55: S-170720-RA-10 (240-82739-1) . This is outside the 48 hour time frame required by the method.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-288478 and analytical batch 240-289079.

Method(s) 8260B: The following sample submitted for volatiles analysis was received with insufficient preservation (pH >2): W-170721-RA-19 (240-82739-3), W-170721-RA-20 (240-82739-4), W-170721-RA-21 (240-82739-5) and W-170721-RA-25 (240-82739-9).

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-288461 and analytical batch 240-289366.

Method(s) 8260B: There was an MS/MSD analyzed in batch 289646 but could not be reported because the associated sample needed reanalyzed in a different batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

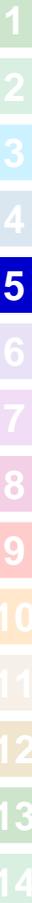
Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-82739-1	S-170720-RA-10	Solid	07/20/17 14:50	07/22/17 09:45
240-82739-2	S-170720-RA-11	Solid	07/20/17 15:00	07/22/17 09:45
240-82739-3	W-170721-RA-19	Water	07/21/17 08:50	07/22/17 09:45
240-82739-4	W-170721-RA-20	Water	07/21/17 09:45	07/22/17 09:45
240-82739-5	W-170721-RA-21	Water	07/21/17 10:20	07/22/17 09:45
240-82739-6	W-170721-RA-22	Water	07/21/17 11:00	07/22/17 09:45
240-82739-7	W-170721-RA-23	Water	07/21/17 11:50	07/22/17 09:45
240-82739-8	W-170721-RA-24	Water	07/21/17 12:05	07/22/17 09:45
240-82739-9	W-170721-RA-25	Water	07/21/17 11:35	07/22/17 09:45
240-82739-10	W-170721-RA-26	Water	07/21/17 12:00	07/22/17 09:45
240-82739-11	W-170721-RA-27	Water	07/21/17 12:15	07/22/17 09:45
240-82739-12	W-170721-RA-28	Water	07/21/17 13:50	07/22/17 09:45
240-82739-13	TRIP BLANK	Water	07/21/17 00:00	07/22/17 09:45

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: S-170720-RA-10

Lab Sample ID: 240-82739-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	8.3	J H B	17	2.7	ug/Kg	1	☼	8260B	Total/NA
Benzene	4.3	H	4.3	0.28	ug/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	2.7	J H B	17	1.1	ug/Kg	1	☼	8260B	Total/NA
Carbon disulfide	0.25	J H	4.3	0.18	ug/Kg	1	☼	8260B	Total/NA
Ethylbenzene	0.90	J H	4.3	0.23	ug/Kg	1	☼	8260B	Total/NA
Toluene	0.45	J H	4.3	0.29	ug/Kg	1	☼	8260B	Total/NA
Vinyl chloride	12	H	4.3	0.24	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	0.39	J H	8.7	0.35	ug/Kg	1	☼	8260B	Total/NA
cis-1,2-Dichloroethene	40	H	4.3	0.24	ug/Kg	1	☼	8260B	Total/NA
trans-1,2-Dichloroethene	4.5	H	4.3	0.33	ug/Kg	1	☼	8260B	Total/NA
Isopropylbenzene	0.32	J H	4.3	0.17	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	1.2	J H B	4.3	0.29	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: S-170720-RA-11

Lab Sample ID: 240-82739-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	200	J B	230	60	ug/Kg	1	☼	8260B	Total/NA
cis-1,2-Dichloroethene	2000		230	32	ug/Kg	1	☼	8260B	Total/NA
trans-1,2-Dichloroethene	76	J	230	32	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: W-170721-RA-19

Lab Sample ID: 240-82739-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.1	J	10	1.8	ug/L	1		8260B	Total/NA
Tetrachloroethene	0.86	J	1.0	0.30	ug/L	1		8260B	Total/NA
Toluene	0.30	J	1.0	0.23	ug/L	1		8260B	Total/NA
Trichloroethene	12		1.0	0.33	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	5.4		1.0	0.30	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	14		1.0	0.29	ug/L	1		8260B	Total/NA

Client Sample ID: W-170721-RA-20

Lab Sample ID: 240-82739-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.6	J	5.0	1.4	ug/L	5		8260B	Total/NA
1,1-Dichloroethene	1.5	J	5.0	1.4	ug/L	5		8260B	Total/NA
Trichloroethene	4.7	J	5.0	1.7	ug/L	5		8260B	Total/NA
Vinyl chloride	12		5.0	2.3	ug/L	5		8260B	Total/NA
cis-1,2-Dichloroethene	160		5.0	1.5	ug/L	5		8260B	Total/NA
trans-1,2-Dichloroethene	87		5.0	1.5	ug/L	5		8260B	Total/NA

Client Sample ID: W-170721-RA-21

Lab Sample ID: 240-82739-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	16		8.0	2.2	ug/L	8		8260B	Total/NA
Vinyl chloride	44		8.0	3.6	ug/L	8		8260B	Total/NA
cis-1,2-Dichloroethene	240		8.0	2.4	ug/L	8		8260B	Total/NA
trans-1,2-Dichloroethene	160		8.0	2.3	ug/L	8		8260B	Total/NA

Client Sample ID: W-170721-RA-22

Lab Sample ID: 240-82739-6

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-22 (Continued)

Lab Sample ID: 240-82739-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	25		5.0	1.4	ug/L	5		8260B	Total/NA
Ethylbenzene	3.9	J	5.0	1.3	ug/L	5		8260B	Total/NA
Vinyl chloride	2.4	J	5.0	2.3	ug/L	5		8260B	Total/NA
Xylenes, Total	3.4	J	10	1.2	ug/L	5		8260B	Total/NA
cis-1,2-Dichloroethene	8.0		5.0	1.5	ug/L	5		8260B	Total/NA
trans-1,2-Dichloroethene	16		5.0	1.5	ug/L	5		8260B	Total/NA
Isopropylbenzene	2.0	J	5.0	1.1	ug/L	5		8260B	Total/NA
Naphthalene	41		5.0	1.3	ug/L	5		8260B	Total/NA

Client Sample ID: W-170721-RA-23

Lab Sample ID: 240-82739-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	48		2.5	0.70	ug/L	2.5		8260B	Total/NA
Ethylbenzene	14		2.5	0.65	ug/L	2.5		8260B	Total/NA
Toluene	0.88	J	2.5	0.58	ug/L	2.5		8260B	Total/NA
Vinyl chloride	4.4		2.5	1.1	ug/L	2.5		8260B	Total/NA
Xylenes, Total	14		5.0	0.60	ug/L	2.5		8260B	Total/NA
trans-1,2-Dichloroethene	13		2.5	0.73	ug/L	2.5		8260B	Total/NA
Isopropylbenzene	3.6		2.5	0.53	ug/L	2.5		8260B	Total/NA
Naphthalene	54		2.5	0.63	ug/L	2.5		8260B	Total/NA

Client Sample ID: W-170721-RA-24

Lab Sample ID: 240-82739-8

No Detections.

Client Sample ID: W-170721-RA-25

Lab Sample ID: 240-82739-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.9	J	10	1.8	ug/L	1		8260B	Total/NA
Tetrachloroethene	10		1.0	0.30	ug/L	1		8260B	Total/NA
Toluene	0.24	J	1.0	0.23	ug/L	1		8260B	Total/NA
Trichloroethene	12		1.0	0.33	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	5.0		1.0	0.30	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	12		1.0	0.29	ug/L	1		8260B	Total/NA

Client Sample ID: W-170721-RA-26

Lab Sample ID: 240-82739-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2.1		2.0	0.60	ug/L	2		8260B	Total/NA
Trichloroethene	17		2.0	0.66	ug/L	2		8260B	Total/NA
Vinyl chloride	0.90	J	2.0	0.90	ug/L	2		8260B	Total/NA
cis-1,2-Dichloroethene	36		2.0	0.60	ug/L	2		8260B	Total/NA
trans-1,2-Dichloroethene	59		2.0	0.58	ug/L	2		8260B	Total/NA
Naphthalene	1.4	J	2.0	0.50	ug/L	2		8260B	Total/NA

Client Sample ID: W-170721-RA-27

Lab Sample ID: 240-82739-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.4	J	10	1.8	ug/L	1		8260B	Total/NA
Naphthalene	0.34	J	1.0	0.25	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-28

Lab Sample ID: 240-82739-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	13		5.0	1.4	ug/L	5		8260B	Total/NA
Vinyl chloride	34		5.0	2.3	ug/L	5		8260B	Total/NA
cis-1,2-Dichloroethene	140		5.0	1.5	ug/L	5		8260B	Total/NA
trans-1,2-Dichloroethene	71		5.0	1.5	ug/L	5		8260B	Total/NA
1,2,4-Trichlorobenzene	4.7	J	5.0	1.4	ug/L	5		8260B	Total/NA
Naphthalene	6.8		5.0	1.3	ug/L	5		8260B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82739-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.4	J	10	1.8	ug/L	1		8260B	Total/NA
Trichloroethene	0.65	J	1.0	0.33	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: S-170720-RA-10

Lab Sample ID: 240-82739-1

Date Collected: 07/20/17 14:50

Matrix: Solid

Date Received: 07/22/17 09:45

Percent Solids: 90.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	8.3	J H B	17	2.7	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Benzene	4.3	H	4.3	0.28	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Dichlorobromomethane	4.3	U H	4.3	0.29	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Bromoform	4.3	U H	4.3	0.35	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Bromomethane	4.3	U H	4.3	0.51	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
2-Butanone (MEK)	2.7	J H B	17	1.1	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Carbon disulfide	0.25	J H	4.3	0.18	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Carbon tetrachloride	4.3	U H	4.3	0.22	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Chlorobenzene	4.3	U H	4.3	0.29	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Chloroethane	4.3	U H	4.3	0.33	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Chloroform	4.3	U H	4.3	0.20	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Chloromethane	4.3	U H	4.3	0.33	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,1-Dichloroethane	4.3	U H	4.3	0.29	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,2-Dichloroethane	4.3	U H	4.3	0.25	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,1-Dichloroethene	4.3	U H	4.3	0.47	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,2-Dichloropropane	4.3	U H	4.3	0.27	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
cis-1,3-Dichloropropene	4.3	U H	4.3	0.23	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
trans-1,3-Dichloropropene	4.3	U H	4.3	0.18	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Ethylbenzene	0.90	J H	4.3	0.23	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
2-Hexanone	17	U H	17	0.50	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Methylene Chloride	4.3	U H	4.3	0.21	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
4-Methyl-2-pentanone (MIBK)	17	U H	17	0.77	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Styrene	4.3	U H	4.3	0.23	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,1,2,2-Tetrachloroethane	4.3	U H	4.3	0.23	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Tetrachloroethene	4.3	U H	4.3	0.32	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Toluene	0.45	J H	4.3	0.29	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Trichloroethene	4.3	U H	4.3	0.36	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Vinyl chloride	12	H	4.3	0.24	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Xylenes, Total	0.39	J H	8.7	0.35	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,1,1-Trichloroethane	4.3	U H	4.3	0.20	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,1,2-Trichloroethane	4.3	U H	4.3	0.34	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Cyclohexane	8.7	U H	8.7	0.18	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,2-Dibromo-3-Chloropropane	8.7	U H	8.7	0.59	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Ethylene Dibromide	4.3	U H	4.3	0.30	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Dichlorodifluoromethane	4.3	U H	4.3	0.30	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
cis-1,2-Dichloroethene	40	H	4.3	0.24	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
trans-1,2-Dichloroethene	4.5	H	4.3	0.33	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Isopropylbenzene	0.32	J H	4.3	0.17	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Methyl acetate	22	U H	22	1.0	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Methyl tert-butyl ether	4.3	U H	4.3	0.23	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.3	U H	4.3	0.42	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,2,4-Trichlorobenzene	4.3	U H	4.3	0.21	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,2-Dichlorobenzene	4.3	U H	4.3	0.19	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,3-Dichlorobenzene	4.3	U H	4.3	0.25	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
1,4-Dichlorobenzene	4.3	U H	4.3	0.30	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Trichlorofluoromethane	4.3	U H	4.3	0.21	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Chlorodibromomethane	4.3	U H	4.3	0.26	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Methylcyclohexane	8.7	U H	8.7	0.20	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1
Naphthalene	1.2	J H B	4.3	0.29	ug/Kg	☼	07/22/17 15:55	07/28/17 16:19	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: S-170720-RA-10

Lab Sample ID: 240-82739-1

Date Collected: 07/20/17 14:50

Matrix: Solid

Date Received: 07/22/17 09:45

Percent Solids: 90.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		61 - 127	07/22/17 15:55	07/28/17 16:19	1
4-Bromofluorobenzene (Surr)	79		61 - 132	07/22/17 15:55	07/28/17 16:19	1
Toluene-d8 (Surr)	91		66 - 125	07/22/17 15:55	07/28/17 16:19	1
Dibromofluoromethane (Surr)	89		43 - 131	07/22/17 15:55	07/28/17 16:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.4		0.1	0.1	%			07/24/17 08:45	1
Percent Moisture	9.6		0.1	0.1	%			07/24/17 08:45	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: S-170720-RA-11

Lab Sample ID: 240-82739-2

Date Collected: 07/20/17 15:00

Matrix: Solid

Date Received: 07/22/17 09:45

Percent Solids: 90.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	920	U	920	89	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Benzene	230	U	230	22	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Dichlorobromomethane	230	U	230	16	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Bromoform	230	U	230	21	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Bromomethane	230	U	230	26	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
2-Butanone (MEK)	920	U	920	46	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Carbon disulfide	230	U	230	16	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Carbon tetrachloride	230	U	230	25	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Chlorobenzene	230	U	230	27	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Chloroethane	230	U	230	26	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Chloroform	230	U	230	22	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Chloromethane	230	U	230	16	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,1-Dichloroethane	230	U	230	28	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,2-Dichloroethane	230	U	230	27	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,1-Dichloroethene	230	U	230	33	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,2-Dichloropropane	230	U	230	27	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
cis-1,3-Dichloropropene	230	U	230	21	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
trans-1,3-Dichloropropene	230	U	230	14	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Ethylbenzene	230	U	230	32	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
2-Hexanone	920	U	920	79	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Methylene Chloride	200	J B	230	60	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
4-Methyl-2-pentanone (MIBK)	920	U	920	37	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Styrene	230	U	230	9.2	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,1,2,2-Tetrachloroethane	230	U	230	22	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Tetrachloroethene	230	U	230	19	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Toluene	230	U	230	22	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Trichloroethene	230	U	230	34	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Vinyl chloride	230	U	230	16	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Xylenes, Total	460	U	460	26	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,1,1-Trichloroethane	230	U	230	26	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,1,2-Trichloroethane	230	U	230	21	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Cyclohexane	460	U	460	27	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,2-Dibromo-3-Chloropropane	460	U	460	44	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Ethylene Dibromide	230	U	230	21	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Dichlorodifluoromethane	230	U	230	20	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
cis-1,2-Dichloroethene	2000		230	32	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
trans-1,2-Dichloroethene	76	J	230	32	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Isopropylbenzene	230	U	230	31	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Methyl acetate	1100	U	1100	69	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Methyl tert-butyl ether	230	U	230	24	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	230	U	230	21	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,2,4-Trichlorobenzene	230	U	230	24	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,2-Dichlorobenzene	230	U	230	16	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,3-Dichlorobenzene	230	U	230	35	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
1,4-Dichlorobenzene	230	U	230	25	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Trichlorofluoromethane	230	U	230	31	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Chlorodibromomethane	230	U	230	31	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Methylcyclohexane	460	U	460	34	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1
Naphthalene	230	U	230	18	ug/Kg	☼	07/24/17 14:10	07/27/17 13:41	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: S-170720-RA-11

Lab Sample ID: 240-82739-2

Date Collected: 07/20/17 15:00

Matrix: Solid

Date Received: 07/22/17 09:45

Percent Solids: 90.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	141		64 - 144	07/24/17 14:10	07/27/17 13:41	1
4-Bromofluorobenzene (Surr)	158	X	58 - 142	07/24/17 14:10	07/27/17 13:41	1
Toluene-d8 (Surr)	124		61 - 137	07/24/17 14:10	07/27/17 13:41	1
Dibromofluoromethane (Surr)	126		31 - 155	07/24/17 14:10	07/27/17 13:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.3		0.1	0.1	%			07/24/17 08:45	1
Percent Moisture	9.7		0.1	0.1	%			07/24/17 08:45	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-19

Lab Sample ID: 240-82739-3

Date Collected: 07/21/17 08:50

Matrix: Water

Date Received: 07/22/17 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2.1	J	10	1.8	ug/L			07/27/17 22:20	1
Benzene	1.0	U	1.0	0.28	ug/L			07/27/17 22:20	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			07/27/17 22:20	1
Bromoform	1.0	U	1.0	0.43	ug/L			07/27/17 22:20	1
Bromomethane	1.0	U	1.0	0.42	ug/L			07/27/17 22:20	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			07/27/17 22:20	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			07/27/17 22:20	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			07/27/17 22:20	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			07/27/17 22:20	1
Chloroethane	1.0	U	1.0	0.41	ug/L			07/27/17 22:20	1
Chloroform	1.0	U	1.0	0.31	ug/L			07/27/17 22:20	1
Chloromethane	1.0	U	1.0	0.43	ug/L			07/27/17 22:20	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			07/27/17 22:20	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			07/27/17 22:20	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			07/27/17 22:20	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			07/27/17 22:20	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			07/27/17 22:20	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			07/27/17 22:20	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			07/27/17 22:20	1
2-Hexanone	10	U	10	1.2	ug/L			07/27/17 22:20	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			07/27/17 22:20	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			07/27/17 22:20	1
Styrene	1.0	U	1.0	0.23	ug/L			07/27/17 22:20	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			07/27/17 22:20	1
Tetrachloroethene	0.86	J	1.0	0.30	ug/L			07/27/17 22:20	1
Toluene	0.30	J	1.0	0.23	ug/L			07/27/17 22:20	1
Trichloroethene	12		1.0	0.33	ug/L			07/27/17 22:20	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/27/17 22:20	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			07/27/17 22:20	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/27/17 22:20	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			07/27/17 22:20	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			07/27/17 22:20	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			07/27/17 22:20	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			07/27/17 22:20	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			07/27/17 22:20	1
cis-1,2-Dichloroethene	5.4		1.0	0.30	ug/L			07/27/17 22:20	1
trans-1,2-Dichloroethene	14		1.0	0.29	ug/L			07/27/17 22:20	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			07/27/17 22:20	1
Methyl acetate	10	U	10	1.4	ug/L			07/27/17 22:20	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			07/27/17 22:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			07/27/17 22:20	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			07/27/17 22:20	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			07/27/17 22:20	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			07/27/17 22:20	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			07/27/17 22:20	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			07/27/17 22:20	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			07/27/17 22:20	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			07/27/17 22:20	1
Naphthalene	1.0	U	1.0	0.25	ug/L			07/27/17 22:20	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-19

Lab Sample ID: 240-82739-3

Date Collected: 07/21/17 08:50

Matrix: Water

Date Received: 07/22/17 09:45

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	104		61 - 138		07/27/17 22:20	1
4-Bromofluorobenzene (Surr)	114		69 - 120		07/27/17 22:20	1
Toluene-d8 (Surr)	102		73 - 120		07/27/17 22:20	1
Dibromofluoromethane (Surr)	96		69 - 124		07/27/17 22:20	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-20

Lab Sample ID: 240-82739-4

Date Collected: 07/21/17 09:45

Matrix: Water

Date Received: 07/22/17 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	50	U	50	8.8	ug/L			07/27/17 22:42	5
Benzene	1.6	J	5.0	1.4	ug/L			07/27/17 22:42	5
Dichlorobromomethane	5.0	U	5.0	1.5	ug/L			07/27/17 22:42	5
Bromoform	5.0	U	5.0	2.2	ug/L			07/27/17 22:42	5
Bromomethane	5.0	U	5.0	2.1	ug/L			07/27/17 22:42	5
2-Butanone (MEK)	50	U	50	5.1	ug/L			07/27/17 22:42	5
Carbon disulfide	5.0	U	5.0	1.7	ug/L			07/27/17 22:42	5
Carbon tetrachloride	5.0	U	5.0	1.8	ug/L			07/27/17 22:42	5
Chlorobenzene	5.0	U	5.0	1.6	ug/L			07/27/17 22:42	5
Chloroethane	5.0	U	5.0	2.1	ug/L			07/27/17 22:42	5
Chloroform	5.0	U	5.0	1.6	ug/L			07/27/17 22:42	5
Chloromethane	5.0	U	5.0	2.2	ug/L			07/27/17 22:42	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			07/27/17 22:42	5
1,2-Dichloroethane	5.0	U	5.0	1.5	ug/L			07/27/17 22:42	5
1,1-Dichloroethene	1.5	J	5.0	1.4	ug/L			07/27/17 22:42	5
1,2-Dichloropropane	5.0	U	5.0	1.5	ug/L			07/27/17 22:42	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.3	ug/L			07/27/17 22:42	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.6	ug/L			07/27/17 22:42	5
Ethylbenzene	5.0	U	5.0	1.3	ug/L			07/27/17 22:42	5
2-Hexanone	50	U	50	6.2	ug/L			07/27/17 22:42	5
Methylene Chloride	5.0	U	5.0	2.7	ug/L			07/27/17 22:42	5
4-Methyl-2-pentanone (MIBK)	50	U	50	3.6	ug/L			07/27/17 22:42	5
Styrene	5.0	U	5.0	1.2	ug/L			07/27/17 22:42	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.6	ug/L			07/27/17 22:42	5
Tetrachloroethene	5.0	U	5.0	1.5	ug/L			07/27/17 22:42	5
Toluene	5.0	U	5.0	1.2	ug/L			07/27/17 22:42	5
Trichloroethene	4.7	J	5.0	1.7	ug/L			07/27/17 22:42	5
Vinyl chloride	12		5.0	2.3	ug/L			07/27/17 22:42	5
Xylenes, Total	10	U	10	1.2	ug/L			07/27/17 22:42	5
1,1,1-Trichloroethane	5.0	U	5.0	1.2	ug/L			07/27/17 22:42	5
1,1,2-Trichloroethane	5.0	U	5.0	1.7	ug/L			07/27/17 22:42	5
Cyclohexane	5.0	U	5.0	2.2	ug/L			07/27/17 22:42	5
1,2-Dibromo-3-Chloropropane	10	U	10	2.4	ug/L			07/27/17 22:42	5
Ethylene Dibromide	5.0	U	5.0	1.2	ug/L			07/27/17 22:42	5
Dichlorodifluoromethane	5.0	U	5.0	2.5	ug/L			07/27/17 22:42	5
cis-1,2-Dichloroethene	160		5.0	1.5	ug/L			07/27/17 22:42	5
trans-1,2-Dichloroethene	87		5.0	1.5	ug/L			07/27/17 22:42	5
Isopropylbenzene	5.0	U	5.0	1.1	ug/L			07/27/17 22:42	5
Methyl acetate	50	U	50	7.2	ug/L			07/27/17 22:42	5
Methyl tert-butyl ether	5.0	U	5.0	1.4	ug/L			07/27/17 22:42	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	2.1	ug/L			07/27/17 22:42	5
1,2,4-Trichlorobenzene	5.0	U	5.0	1.4	ug/L			07/27/17 22:42	5
1,2-Dichlorobenzene	5.0	U	5.0	1.3	ug/L			07/27/17 22:42	5
1,3-Dichlorobenzene	5.0	U	5.0	1.6	ug/L			07/27/17 22:42	5
1,4-Dichlorobenzene	5.0	U	5.0	1.2	ug/L			07/27/17 22:42	5
Trichlorofluoromethane	5.0	U	5.0	2.5	ug/L			07/27/17 22:42	5
Chlorodibromomethane	5.0	U	5.0	1.3	ug/L			07/27/17 22:42	5
Methylcyclohexane	5.0	U	5.0	2.3	ug/L			07/27/17 22:42	5
Naphthalene	5.0	U	5.0	1.3	ug/L			07/27/17 22:42	5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-20

Date Collected: 07/21/17 09:45

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-4

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	105		61 - 138		07/27/17 22:42	5
4-Bromofluorobenzene (Surr)	116		69 - 120		07/27/17 22:42	5
Toluene-d8 (Surr)	103		73 - 120		07/27/17 22:42	5
Dibromofluoromethane (Surr)	98		69 - 124		07/27/17 22:42	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-21

Lab Sample ID: 240-82739-5

Date Collected: 07/21/17 10:20

Matrix: Water

Date Received: 07/22/17 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	80	U	80	14	ug/L			07/27/17 23:04	8
Benzene	16		8.0	2.2	ug/L			07/27/17 23:04	8
Dichlorobromomethane	8.0	U	8.0	2.4	ug/L			07/27/17 23:04	8
Bromoform	8.0	U	8.0	3.4	ug/L			07/27/17 23:04	8
Bromomethane	8.0	U	8.0	3.4	ug/L			07/27/17 23:04	8
2-Butanone (MEK)	80	U	80	8.2	ug/L			07/27/17 23:04	8
Carbon disulfide	8.0	U	8.0	2.7	ug/L			07/27/17 23:04	8
Carbon tetrachloride	8.0	U	8.0	2.8	ug/L			07/27/17 23:04	8
Chlorobenzene	8.0	U	8.0	2.6	ug/L			07/27/17 23:04	8
Chloroethane	8.0	U	8.0	3.3	ug/L			07/27/17 23:04	8
Chloroform	8.0	U	8.0	2.5	ug/L			07/27/17 23:04	8
Chloromethane	8.0	U	8.0	3.4	ug/L			07/27/17 23:04	8
1,1-Dichloroethane	8.0	U	8.0	2.0	ug/L			07/27/17 23:04	8
1,2-Dichloroethane	8.0	U	8.0	2.4	ug/L			07/27/17 23:04	8
1,1-Dichloroethene	8.0	U	8.0	2.2	ug/L			07/27/17 23:04	8
1,2-Dichloropropane	8.0	U	8.0	2.4	ug/L			07/27/17 23:04	8
cis-1,3-Dichloropropene	8.0	U	8.0	2.1	ug/L			07/27/17 23:04	8
trans-1,3-Dichloropropene	8.0	U	8.0	2.5	ug/L			07/27/17 23:04	8
Ethylbenzene	8.0	U	8.0	2.1	ug/L			07/27/17 23:04	8
2-Hexanone	80	U	80	9.8	ug/L			07/27/17 23:04	8
Methylene Chloride	8.0	U	8.0	4.2	ug/L			07/27/17 23:04	8
4-Methyl-2-pentanone (MIBK)	80	U	80	5.7	ug/L			07/27/17 23:04	8
Styrene	8.0	U	8.0	1.8	ug/L			07/27/17 23:04	8
1,1,2,2-Tetrachloroethane	8.0	U	8.0	2.6	ug/L			07/27/17 23:04	8
Tetrachloroethene	8.0	U	8.0	2.4	ug/L			07/27/17 23:04	8
Toluene	8.0	U	8.0	1.8	ug/L			07/27/17 23:04	8
Trichloroethene	8.0	U	8.0	2.6	ug/L			07/27/17 23:04	8
Vinyl chloride	44		8.0	3.6	ug/L			07/27/17 23:04	8
Xylenes, Total	16	U	16	1.9	ug/L			07/27/17 23:04	8
1,1,1-Trichloroethane	8.0	U	8.0	1.8	ug/L			07/27/17 23:04	8
1,1,2-Trichloroethane	8.0	U	8.0	2.7	ug/L			07/27/17 23:04	8
Cyclohexane	8.0	U	8.0	3.5	ug/L			07/27/17 23:04	8
1,2-Dibromo-3-Chloropropane	16	U	16	3.8	ug/L			07/27/17 23:04	8
Ethylene Dibromide	8.0	U	8.0	1.8	ug/L			07/27/17 23:04	8
Dichlorodifluoromethane	8.0	U	8.0	4.0	ug/L			07/27/17 23:04	8
cis-1,2-Dichloroethene	240		8.0	2.4	ug/L			07/27/17 23:04	8
trans-1,2-Dichloroethene	160		8.0	2.3	ug/L			07/27/17 23:04	8
Isopropylbenzene	8.0	U	8.0	1.7	ug/L			07/27/17 23:04	8
Methyl acetate	80	U	80	11	ug/L			07/27/17 23:04	8
Methyl tert-butyl ether	8.0	U	8.0	2.2	ug/L			07/27/17 23:04	8
1,1,2-Trichloro-1,2,2-trifluoroethane	8.0	U	8.0	3.3	ug/L			07/27/17 23:04	8
1,2,4-Trichlorobenzene	8.0	U	8.0	2.2	ug/L			07/27/17 23:04	8
1,2-Dichlorobenzene	8.0	U	8.0	2.1	ug/L			07/27/17 23:04	8
1,3-Dichlorobenzene	8.0	U	8.0	2.6	ug/L			07/27/17 23:04	8
1,4-Dichlorobenzene	8.0	U	8.0	1.8	ug/L			07/27/17 23:04	8
Trichlorofluoromethane	8.0	U	8.0	4.0	ug/L			07/27/17 23:04	8
Chlorodibromomethane	8.0	U	8.0	2.0	ug/L			07/27/17 23:04	8
Methylcyclohexane	8.0	U	8.0	3.6	ug/L			07/27/17 23:04	8
Naphthalene	8.0	U	8.0	2.0	ug/L			07/27/17 23:04	8

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-21

Date Collected: 07/21/17 10:20

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-5

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	119		61 - 138		07/27/17 23:04	8
4-Bromofluorobenzene (Surr)	112		69 - 120		07/27/17 23:04	8
Toluene-d8 (Surr)	104		73 - 120		07/27/17 23:04	8
Dibromofluoromethane (Surr)	106		69 - 124		07/27/17 23:04	8

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-22

Lab Sample ID: 240-82739-6

Date Collected: 07/21/17 11:00

Matrix: Water

Date Received: 07/22/17 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	50	U	50	8.8	ug/L			08/02/17 15:02	5
Benzene	25		5.0	1.4	ug/L			08/02/17 15:02	5
Dichlorobromomethane	5.0	U	5.0	1.5	ug/L			08/02/17 15:02	5
Bromoform	5.0	U	5.0	2.2	ug/L			08/02/17 15:02	5
Bromomethane	5.0	U	5.0	2.1	ug/L			08/02/17 15:02	5
2-Butanone (MEK)	50	U	50	5.1	ug/L			08/02/17 15:02	5
Carbon disulfide	5.0	U	5.0	1.7	ug/L			08/02/17 15:02	5
Carbon tetrachloride	5.0	U	5.0	1.8	ug/L			08/02/17 15:02	5
Chlorobenzene	5.0	U	5.0	1.6	ug/L			08/02/17 15:02	5
Chloroethane	5.0	U	5.0	2.1	ug/L			08/02/17 15:02	5
Chloroform	5.0	U	5.0	1.6	ug/L			08/02/17 15:02	5
Chloromethane	5.0	U	5.0	2.2	ug/L			08/02/17 15:02	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			08/02/17 15:02	5
1,2-Dichloroethane	5.0	U	5.0	1.5	ug/L			08/02/17 15:02	5
1,1-Dichloroethene	5.0	U	5.0	1.4	ug/L			08/02/17 15:02	5
1,2-Dichloropropane	5.0	U	5.0	1.5	ug/L			08/02/17 15:02	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.3	ug/L			08/02/17 15:02	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.6	ug/L			08/02/17 15:02	5
Ethylbenzene	3.9	J	5.0	1.3	ug/L			08/02/17 15:02	5
2-Hexanone	50	U	50	6.2	ug/L			08/02/17 15:02	5
Methylene Chloride	5.0	U	5.0	2.7	ug/L			08/02/17 15:02	5
4-Methyl-2-pentanone (MIBK)	50	U	50	3.6	ug/L			08/02/17 15:02	5
Styrene	5.0	U	5.0	1.2	ug/L			08/02/17 15:02	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.6	ug/L			08/02/17 15:02	5
Tetrachloroethene	5.0	U	5.0	1.5	ug/L			08/02/17 15:02	5
Toluene	5.0	U	5.0	1.2	ug/L			08/02/17 15:02	5
Trichloroethene	5.0	U	5.0	1.7	ug/L			08/02/17 15:02	5
Vinyl chloride	2.4	J	5.0	2.3	ug/L			08/02/17 15:02	5
Xylenes, Total	3.4	J	10	1.2	ug/L			08/02/17 15:02	5
1,1,1-Trichloroethane	5.0	U	5.0	1.2	ug/L			08/02/17 15:02	5
1,1,2-Trichloroethane	5.0	U	5.0	1.7	ug/L			08/02/17 15:02	5
Cyclohexane	5.0	U	5.0	2.2	ug/L			08/02/17 15:02	5
1,2-Dibromo-3-Chloropropane	10	U	10	2.4	ug/L			08/02/17 15:02	5
Ethylene Dibromide	5.0	U	5.0	1.2	ug/L			08/02/17 15:02	5
Dichlorodifluoromethane	5.0	U	5.0	2.5	ug/L			08/02/17 15:02	5
cis-1,2-Dichloroethene	8.0		5.0	1.5	ug/L			08/02/17 15:02	5
trans-1,2-Dichloroethene	16		5.0	1.5	ug/L			08/02/17 15:02	5
Isopropylbenzene	2.0	J	5.0	1.1	ug/L			08/02/17 15:02	5
Methyl acetate	50	U	50	7.2	ug/L			08/02/17 15:02	5
Methyl tert-butyl ether	5.0	U	5.0	1.4	ug/L			08/02/17 15:02	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	2.1	ug/L			08/02/17 15:02	5
1,2,4-Trichlorobenzene	5.0	U	5.0	1.4	ug/L			08/02/17 15:02	5
1,2-Dichlorobenzene	5.0	U	5.0	1.3	ug/L			08/02/17 15:02	5
1,3-Dichlorobenzene	5.0	U	5.0	1.6	ug/L			08/02/17 15:02	5
1,4-Dichlorobenzene	5.0	U	5.0	1.2	ug/L			08/02/17 15:02	5
Trichlorofluoromethane	5.0	U	5.0	2.5	ug/L			08/02/17 15:02	5
Chlorodibromomethane	5.0	U	5.0	1.3	ug/L			08/02/17 15:02	5
Methylcyclohexane	5.0	U	5.0	2.3	ug/L			08/02/17 15:02	5
Naphthalene	41		5.0	1.3	ug/L			08/02/17 15:02	5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-22

Date Collected: 07/21/17 11:00

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-6

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	103		61 - 138		08/02/17 15:02	5
4-Bromofluorobenzene (Surr)	107		69 - 120		08/02/17 15:02	5
Toluene-d8 (Surr)	103		73 - 120		08/02/17 15:02	5
Dibromofluoromethane (Surr)	95		69 - 124		08/02/17 15:02	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-23

Lab Sample ID: 240-82739-7

Date Collected: 07/21/17 11:50

Matrix: Water

Date Received: 07/22/17 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	4.4	ug/L			08/02/17 15:24	2.5
Benzene	48		2.5	0.70	ug/L			08/02/17 15:24	2.5
Dichlorobromomethane	2.5	U	2.5	0.75	ug/L			08/02/17 15:24	2.5
Bromoform	2.5	U	2.5	1.1	ug/L			08/02/17 15:24	2.5
Bromomethane	2.5	U	2.5	1.1	ug/L			08/02/17 15:24	2.5
2-Butanone (MEK)	25	U	25	2.6	ug/L			08/02/17 15:24	2.5
Carbon disulfide	2.5	U	2.5	0.85	ug/L			08/02/17 15:24	2.5
Carbon tetrachloride	2.5	U	2.5	0.88	ug/L			08/02/17 15:24	2.5
Chlorobenzene	2.5	U	2.5	0.80	ug/L			08/02/17 15:24	2.5
Chloroethane	2.5	U	2.5	1.0	ug/L			08/02/17 15:24	2.5
Chloroform	2.5	U	2.5	0.78	ug/L			08/02/17 15:24	2.5
Chloromethane	2.5	U	2.5	1.1	ug/L			08/02/17 15:24	2.5
1,1-Dichloroethane	2.5	U	2.5	0.63	ug/L			08/02/17 15:24	2.5
1,2-Dichloroethane	2.5	U	2.5	0.75	ug/L			08/02/17 15:24	2.5
1,1-Dichloroethene	2.5	U	2.5	0.68	ug/L			08/02/17 15:24	2.5
1,2-Dichloropropane	2.5	U	2.5	0.75	ug/L			08/02/17 15:24	2.5
cis-1,3-Dichloropropene	2.5	U	2.5	0.65	ug/L			08/02/17 15:24	2.5
trans-1,3-Dichloropropene	2.5	U	2.5	0.78	ug/L			08/02/17 15:24	2.5
Ethylbenzene	14		2.5	0.65	ug/L			08/02/17 15:24	2.5
2-Hexanone	25	U	25	3.1	ug/L			08/02/17 15:24	2.5
Methylene Chloride	2.5	U	2.5	1.3	ug/L			08/02/17 15:24	2.5
4-Methyl-2-pentanone (MIBK)	25	U	25	1.8	ug/L			08/02/17 15:24	2.5
Styrene	2.5	U	2.5	0.58	ug/L			08/02/17 15:24	2.5
1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.80	ug/L			08/02/17 15:24	2.5
Tetrachloroethene	2.5	U	2.5	0.75	ug/L			08/02/17 15:24	2.5
Toluene	0.88	J	2.5	0.58	ug/L			08/02/17 15:24	2.5
Trichloroethene	2.5	U	2.5	0.83	ug/L			08/02/17 15:24	2.5
Vinyl chloride	4.4		2.5	1.1	ug/L			08/02/17 15:24	2.5
Xylenes, Total	14		5.0	0.60	ug/L			08/02/17 15:24	2.5
1,1,1-Trichloroethane	2.5	U	2.5	0.58	ug/L			08/02/17 15:24	2.5
1,1,2-Trichloroethane	2.5	U	2.5	0.85	ug/L			08/02/17 15:24	2.5
Cyclohexane	2.5	U	2.5	1.1	ug/L			08/02/17 15:24	2.5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.2	ug/L			08/02/17 15:24	2.5
Ethylene Dibromide	2.5	U	2.5	0.58	ug/L			08/02/17 15:24	2.5
Dichlorodifluoromethane	2.5	U	2.5	1.3	ug/L			08/02/17 15:24	2.5
cis-1,2-Dichloroethene	2.5	U	2.5	0.75	ug/L			08/02/17 15:24	2.5
trans-1,2-Dichloroethene	13		2.5	0.73	ug/L			08/02/17 15:24	2.5
Isopropylbenzene	3.6		2.5	0.53	ug/L			08/02/17 15:24	2.5
Methyl acetate	25	U	25	3.6	ug/L			08/02/17 15:24	2.5
Methyl tert-butyl ether	2.5	U	2.5	0.68	ug/L			08/02/17 15:24	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U	2.5	1.0	ug/L			08/02/17 15:24	2.5
1,2,4-Trichlorobenzene	2.5	U	2.5	0.68	ug/L			08/02/17 15:24	2.5
1,2-Dichlorobenzene	2.5	U	2.5	0.65	ug/L			08/02/17 15:24	2.5
1,3-Dichlorobenzene	2.5	U	2.5	0.80	ug/L			08/02/17 15:24	2.5
1,4-Dichlorobenzene	2.5	U	2.5	0.58	ug/L			08/02/17 15:24	2.5
Trichlorofluoromethane	2.5	U	2.5	1.3	ug/L			08/02/17 15:24	2.5
Chlorodibromomethane	2.5	U	2.5	0.63	ug/L			08/02/17 15:24	2.5
Methylcyclohexane	2.5	U	2.5	1.1	ug/L			08/02/17 15:24	2.5
Naphthalene	54		2.5	0.63	ug/L			08/02/17 15:24	2.5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-23

Date Collected: 07/21/17 11:50

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-7

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	99		61 - 138		08/02/17 15:24	2.5
4-Bromofluorobenzene (Surr)	115		69 - 120		08/02/17 15:24	2.5
Toluene-d8 (Surr)	103		73 - 120		08/02/17 15:24	2.5
Dibromofluoromethane (Surr)	94		69 - 124		08/02/17 15:24	2.5

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-24

Lab Sample ID: 240-82739-8

Date Collected: 07/21/17 12:05

Matrix: Water

Date Received: 07/22/17 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/02/17 14:38	1
Benzene	1.0	U	1.0	0.28	ug/L			08/02/17 14:38	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/02/17 14:38	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/02/17 14:38	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/02/17 14:38	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/02/17 14:38	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/02/17 14:38	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/02/17 14:38	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/02/17 14:38	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/02/17 14:38	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/02/17 14:38	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/02/17 14:38	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/02/17 14:38	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/02/17 14:38	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/02/17 14:38	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/02/17 14:38	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/02/17 14:38	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/02/17 14:38	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/02/17 14:38	1
2-Hexanone	10	U	10	1.2	ug/L			08/02/17 14:38	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/02/17 14:38	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/02/17 14:38	1
Styrene	1.0	U	1.0	0.23	ug/L			08/02/17 14:38	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/02/17 14:38	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/02/17 14:38	1
Toluene	1.0	U	1.0	0.23	ug/L			08/02/17 14:38	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/02/17 14:38	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/02/17 14:38	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/02/17 14:38	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/02/17 14:38	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/02/17 14:38	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/02/17 14:38	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/02/17 14:38	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/02/17 14:38	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/02/17 14:38	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/02/17 14:38	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/02/17 14:38	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/02/17 14:38	1
Methyl acetate	10	U	10	1.4	ug/L			08/02/17 14:38	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/02/17 14:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/02/17 14:38	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/02/17 14:38	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/02/17 14:38	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/02/17 14:38	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/02/17 14:38	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/02/17 14:38	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/02/17 14:38	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/02/17 14:38	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/02/17 14:38	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-24

Lab Sample ID: 240-82739-8

Date Collected: 07/21/17 12:05

Matrix: Water

Date Received: 07/22/17 09:45

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	104		61 - 138		08/02/17 14:38	1
4-Bromofluorobenzene (Surr)	107		69 - 120		08/02/17 14:38	1
Toluene-d8 (Surr)	103		73 - 120		08/02/17 14:38	1
Dibromofluoromethane (Surr)	97		69 - 124		08/02/17 14:38	1

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-25

Lab Sample ID: 240-82739-9

Date Collected: 07/21/17 11:35

Matrix: Water

Date Received: 07/22/17 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.9	J	10	1.8	ug/L			07/27/17 23:25	1
Benzene	1.0	U	1.0	0.28	ug/L			07/27/17 23:25	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			07/27/17 23:25	1
Bromoform	1.0	U	1.0	0.43	ug/L			07/27/17 23:25	1
Bromomethane	1.0	U	1.0	0.42	ug/L			07/27/17 23:25	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			07/27/17 23:25	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			07/27/17 23:25	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			07/27/17 23:25	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			07/27/17 23:25	1
Chloroethane	1.0	U	1.0	0.41	ug/L			07/27/17 23:25	1
Chloroform	1.0	U	1.0	0.31	ug/L			07/27/17 23:25	1
Chloromethane	1.0	U	1.0	0.43	ug/L			07/27/17 23:25	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			07/27/17 23:25	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			07/27/17 23:25	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			07/27/17 23:25	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			07/27/17 23:25	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			07/27/17 23:25	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			07/27/17 23:25	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			07/27/17 23:25	1
2-Hexanone	10	U	10	1.2	ug/L			07/27/17 23:25	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			07/27/17 23:25	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			07/27/17 23:25	1
Styrene	1.0	U	1.0	0.23	ug/L			07/27/17 23:25	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			07/27/17 23:25	1
Tetrachloroethene	10		1.0	0.30	ug/L			07/27/17 23:25	1
Toluene	0.24	J	1.0	0.23	ug/L			07/27/17 23:25	1
Trichloroethene	12		1.0	0.33	ug/L			07/27/17 23:25	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/27/17 23:25	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			07/27/17 23:25	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/27/17 23:25	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			07/27/17 23:25	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			07/27/17 23:25	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			07/27/17 23:25	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			07/27/17 23:25	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			07/27/17 23:25	1
cis-1,2-Dichloroethene	5.0		1.0	0.30	ug/L			07/27/17 23:25	1
trans-1,2-Dichloroethene	12		1.0	0.29	ug/L			07/27/17 23:25	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			07/27/17 23:25	1
Methyl acetate	10	U	10	1.4	ug/L			07/27/17 23:25	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			07/27/17 23:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			07/27/17 23:25	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			07/27/17 23:25	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			07/27/17 23:25	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			07/27/17 23:25	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			07/27/17 23:25	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			07/27/17 23:25	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			07/27/17 23:25	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			07/27/17 23:25	1
Naphthalene	1.0	U	1.0	0.25	ug/L			07/27/17 23:25	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-25

Lab Sample ID: 240-82739-9

Date Collected: 07/21/17 11:35

Matrix: Water

Date Received: 07/22/17 09:45

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	106		61 - 138		07/27/17 23:25	1
4-Bromofluorobenzene (Surr)	115		69 - 120		07/27/17 23:25	1
Toluene-d8 (Surr)	90		73 - 120		07/27/17 23:25	1
Dibromofluoromethane (Surr)	97		69 - 124		07/27/17 23:25	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-26

Lab Sample ID: 240-82739-10

Date Collected: 07/21/17 12:00

Matrix: Water

Date Received: 07/22/17 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20	U	20	3.5	ug/L			08/01/17 16:57	2
Benzene	2.0	U	2.0	0.56	ug/L			08/01/17 16:57	2
Dichlorobromomethane	2.0	U	2.0	0.60	ug/L			08/01/17 16:57	2
Bromoform	2.0	U	2.0	0.86	ug/L			08/01/17 16:57	2
Bromomethane	2.0	U	2.0	0.84	ug/L			08/01/17 16:57	2
2-Butanone (MEK)	20	U	20	2.0	ug/L			08/01/17 16:57	2
Carbon disulfide	2.0	U	2.0	0.68	ug/L			08/01/17 16:57	2
Carbon tetrachloride	2.0	U	2.0	0.70	ug/L			08/01/17 16:57	2
Chlorobenzene	2.0	U	2.0	0.64	ug/L			08/01/17 16:57	2
Chloroethane	2.0	U	2.0	0.82	ug/L			08/01/17 16:57	2
Chloroform	2.0	U	2.0	0.62	ug/L			08/01/17 16:57	2
Chloromethane	2.0	U	2.0	0.86	ug/L			08/01/17 16:57	2
1,1-Dichloroethane	2.0	U	2.0	0.50	ug/L			08/01/17 16:57	2
1,2-Dichloroethane	2.0	U	2.0	0.60	ug/L			08/01/17 16:57	2
1,1-Dichloroethene	2.0	U	2.0	0.54	ug/L			08/01/17 16:57	2
1,2-Dichloropropane	2.0	U	2.0	0.60	ug/L			08/01/17 16:57	2
cis-1,3-Dichloropropene	2.0	U	2.0	0.52	ug/L			08/01/17 16:57	2
trans-1,3-Dichloropropene	2.0	U	2.0	0.62	ug/L			08/01/17 16:57	2
Ethylbenzene	2.0	U	2.0	0.52	ug/L			08/01/17 16:57	2
2-Hexanone	20	U	20	2.5	ug/L			08/01/17 16:57	2
Methylene Chloride	2.0	U	2.0	1.1	ug/L			08/01/17 16:57	2
4-Methyl-2-pentanone (MIBK)	20	U	20	1.4	ug/L			08/01/17 16:57	2
Styrene	2.0	U	2.0	0.46	ug/L			08/01/17 16:57	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.64	ug/L			08/01/17 16:57	2
Tetrachloroethene	2.1		2.0	0.60	ug/L			08/01/17 16:57	2
Toluene	2.0	U	2.0	0.46	ug/L			08/01/17 16:57	2
Trichloroethene	17		2.0	0.66	ug/L			08/01/17 16:57	2
Vinyl chloride	0.90	J	2.0	0.90	ug/L			08/01/17 16:57	2
Xylenes, Total	4.0	U	4.0	0.48	ug/L			08/01/17 16:57	2
1,1,1-Trichloroethane	2.0	U	2.0	0.46	ug/L			08/01/17 16:57	2
1,1,2-Trichloroethane	2.0	U	2.0	0.68	ug/L			08/01/17 16:57	2
Cyclohexane	2.0	U	2.0	0.88	ug/L			08/01/17 16:57	2
1,2-Dibromo-3-Chloropropane	4.0	U	4.0	0.94	ug/L			08/01/17 16:57	2
Ethylene Dibromide	2.0	U	2.0	0.46	ug/L			08/01/17 16:57	2
Dichlorodifluoromethane	2.0	U	2.0	1.0	ug/L			08/01/17 16:57	2
cis-1,2-Dichloroethene	36		2.0	0.60	ug/L			08/01/17 16:57	2
trans-1,2-Dichloroethene	59		2.0	0.58	ug/L			08/01/17 16:57	2
Isopropylbenzene	2.0	U	2.0	0.42	ug/L			08/01/17 16:57	2
Methyl acetate	20	U	20	2.9	ug/L			08/01/17 16:57	2
Methyl tert-butyl ether	2.0	U	2.0	0.54	ug/L			08/01/17 16:57	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0	0.82	ug/L			08/01/17 16:57	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.54	ug/L			08/01/17 16:57	2
1,2-Dichlorobenzene	2.0	U	2.0	0.52	ug/L			08/01/17 16:57	2
1,3-Dichlorobenzene	2.0	U	2.0	0.64	ug/L			08/01/17 16:57	2
1,4-Dichlorobenzene	2.0	U	2.0	0.46	ug/L			08/01/17 16:57	2
Trichlorofluoromethane	2.0	U	2.0	1.0	ug/L			08/01/17 16:57	2
Chlorodibromomethane	2.0	U	2.0	0.50	ug/L			08/01/17 16:57	2
Methylcyclohexane	2.0	U	2.0	0.90	ug/L			08/01/17 16:57	2
Naphthalene	1.4	J	2.0	0.50	ug/L			08/01/17 16:57	2

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-26

Lab Sample ID: 240-82739-10

Date Collected: 07/21/17 12:00

Matrix: Water

Date Received: 07/22/17 09:45

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	102		61 - 138		08/01/17 16:57	2
4-Bromofluorobenzene (Surr)	113		69 - 120		08/01/17 16:57	2
Toluene-d8 (Surr)	104		73 - 120		08/01/17 16:57	2
Dibromofluoromethane (Surr)	97		69 - 124		08/01/17 16:57	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-27

Lab Sample ID: 240-82739-11

Date Collected: 07/21/17 12:15

Matrix: Water

Date Received: 07/22/17 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.4	J	10	1.8	ug/L			08/01/17 17:19	1
Benzene	1.0	U	1.0	0.28	ug/L			08/01/17 17:19	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/01/17 17:19	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/01/17 17:19	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/01/17 17:19	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/01/17 17:19	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/01/17 17:19	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/01/17 17:19	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/01/17 17:19	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/01/17 17:19	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/01/17 17:19	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/01/17 17:19	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/01/17 17:19	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/01/17 17:19	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/01/17 17:19	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/01/17 17:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/01/17 17:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/01/17 17:19	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/01/17 17:19	1
2-Hexanone	10	U	10	1.2	ug/L			08/01/17 17:19	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/01/17 17:19	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/01/17 17:19	1
Styrene	1.0	U	1.0	0.23	ug/L			08/01/17 17:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/01/17 17:19	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/01/17 17:19	1
Toluene	1.0	U	1.0	0.23	ug/L			08/01/17 17:19	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/01/17 17:19	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/01/17 17:19	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/01/17 17:19	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/01/17 17:19	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/01/17 17:19	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/01/17 17:19	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/01/17 17:19	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/01/17 17:19	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/01/17 17:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/01/17 17:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/01/17 17:19	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/01/17 17:19	1
Methyl acetate	10	U	10	1.4	ug/L			08/01/17 17:19	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/01/17 17:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/01/17 17:19	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/01/17 17:19	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/01/17 17:19	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/01/17 17:19	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/01/17 17:19	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/01/17 17:19	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/01/17 17:19	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/01/17 17:19	1
Naphthalene	0.34	J	1.0	0.25	ug/L			08/01/17 17:19	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-27

Lab Sample ID: 240-82739-11

Date Collected: 07/21/17 12:15

Matrix: Water

Date Received: 07/22/17 09:45

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	105		61 - 138		08/01/17 17:19	1
4-Bromofluorobenzene (Surr)	113		69 - 120		08/01/17 17:19	1
Toluene-d8 (Surr)	104		73 - 120		08/01/17 17:19	1
Dibromofluoromethane (Surr)	96		69 - 124		08/01/17 17:19	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-28

Lab Sample ID: 240-82739-12

Date Collected: 07/21/17 13:50

Matrix: Water

Date Received: 07/22/17 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	50	U	50	8.8	ug/L			08/01/17 21:42	5
Benzene	13		5.0	1.4	ug/L			08/01/17 21:42	5
Dichlorobromomethane	5.0	U	5.0	1.5	ug/L			08/01/17 21:42	5
Bromoform	5.0	U	5.0	2.2	ug/L			08/01/17 21:42	5
Bromomethane	5.0	U	5.0	2.1	ug/L			08/01/17 21:42	5
2-Butanone (MEK)	50	U	50	5.1	ug/L			08/01/17 21:42	5
Carbon disulfide	5.0	U	5.0	1.7	ug/L			08/01/17 21:42	5
Carbon tetrachloride	5.0	U	5.0	1.8	ug/L			08/01/17 21:42	5
Chlorobenzene	5.0	U	5.0	1.6	ug/L			08/01/17 21:42	5
Chloroethane	5.0	U	5.0	2.1	ug/L			08/01/17 21:42	5
Chloroform	5.0	U	5.0	1.6	ug/L			08/01/17 21:42	5
Chloromethane	5.0	U	5.0	2.2	ug/L			08/01/17 21:42	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			08/01/17 21:42	5
1,2-Dichloroethane	5.0	U	5.0	1.5	ug/L			08/01/17 21:42	5
1,1-Dichloroethene	5.0	U	5.0	1.4	ug/L			08/01/17 21:42	5
1,2-Dichloropropane	5.0	U	5.0	1.5	ug/L			08/01/17 21:42	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.3	ug/L			08/01/17 21:42	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.6	ug/L			08/01/17 21:42	5
Ethylbenzene	5.0	U	5.0	1.3	ug/L			08/01/17 21:42	5
2-Hexanone	50	U	50	6.2	ug/L			08/01/17 21:42	5
Methylene Chloride	5.0	U	5.0	2.7	ug/L			08/01/17 21:42	5
4-Methyl-2-pentanone (MIBK)	50	U	50	3.6	ug/L			08/01/17 21:42	5
Styrene	5.0	U	5.0	1.2	ug/L			08/01/17 21:42	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.6	ug/L			08/01/17 21:42	5
Tetrachloroethene	5.0	U	5.0	1.5	ug/L			08/01/17 21:42	5
Toluene	5.0	U	5.0	1.2	ug/L			08/01/17 21:42	5
Trichloroethene	5.0	U	5.0	1.7	ug/L			08/01/17 21:42	5
Vinyl chloride	34		5.0	2.3	ug/L			08/01/17 21:42	5
Xylenes, Total	10	U	10	1.2	ug/L			08/01/17 21:42	5
1,1,1-Trichloroethane	5.0	U	5.0	1.2	ug/L			08/01/17 21:42	5
1,1,2-Trichloroethane	5.0	U	5.0	1.7	ug/L			08/01/17 21:42	5
Cyclohexane	5.0	U	5.0	2.2	ug/L			08/01/17 21:42	5
1,2-Dibromo-3-Chloropropane	10	U	10	2.4	ug/L			08/01/17 21:42	5
Ethylene Dibromide	5.0	U	5.0	1.2	ug/L			08/01/17 21:42	5
Dichlorodifluoromethane	5.0	U	5.0	2.5	ug/L			08/01/17 21:42	5
cis-1,2-Dichloroethene	140		5.0	1.5	ug/L			08/01/17 21:42	5
trans-1,2-Dichloroethene	71		5.0	1.5	ug/L			08/01/17 21:42	5
Isopropylbenzene	5.0	U	5.0	1.1	ug/L			08/01/17 21:42	5
Methyl acetate	50	U	50	7.2	ug/L			08/01/17 21:42	5
Methyl tert-butyl ether	5.0	U	5.0	1.4	ug/L			08/01/17 21:42	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	2.1	ug/L			08/01/17 21:42	5
1,2,4-Trichlorobenzene	4.7	J	5.0	1.4	ug/L			08/01/17 21:42	5
1,2-Dichlorobenzene	5.0	U	5.0	1.3	ug/L			08/01/17 21:42	5
1,3-Dichlorobenzene	5.0	U	5.0	1.6	ug/L			08/01/17 21:42	5
1,4-Dichlorobenzene	5.0	U	5.0	1.2	ug/L			08/01/17 21:42	5
Trichlorofluoromethane	5.0	U	5.0	2.5	ug/L			08/01/17 21:42	5
Chlorodibromomethane	5.0	U	5.0	1.3	ug/L			08/01/17 21:42	5
Methylcyclohexane	5.0	U	5.0	2.3	ug/L			08/01/17 21:42	5
Naphthalene	6.8		5.0	1.3	ug/L			08/01/17 21:42	5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-28

Lab Sample ID: 240-82739-12

Date Collected: 07/21/17 13:50

Matrix: Water

Date Received: 07/22/17 09:45

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	107		61 - 138		08/01/17 21:42	5
4-Bromofluorobenzene (Surr)	113		69 - 120		08/01/17 21:42	5
Toluene-d8 (Surr)	104		73 - 120		08/01/17 21:42	5
Dibromofluoromethane (Surr)	96		69 - 124		08/01/17 21:42	5

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82739-13

Date Collected: 07/21/17 00:00

Matrix: Water

Date Received: 07/22/17 09:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.4	J	10	1.8	ug/L			08/01/17 22:04	1
Benzene	1.0	U	1.0	0.28	ug/L			08/01/17 22:04	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/01/17 22:04	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/01/17 22:04	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/01/17 22:04	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/01/17 22:04	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/01/17 22:04	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/01/17 22:04	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/01/17 22:04	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/01/17 22:04	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/01/17 22:04	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/01/17 22:04	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/01/17 22:04	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/01/17 22:04	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/01/17 22:04	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/01/17 22:04	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/01/17 22:04	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/01/17 22:04	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/01/17 22:04	1
2-Hexanone	10	U	10	1.2	ug/L			08/01/17 22:04	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/01/17 22:04	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/01/17 22:04	1
Styrene	1.0	U	1.0	0.23	ug/L			08/01/17 22:04	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/01/17 22:04	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/01/17 22:04	1
Toluene	1.0	U	1.0	0.23	ug/L			08/01/17 22:04	1
Trichloroethene	0.65	J	1.0	0.33	ug/L			08/01/17 22:04	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/01/17 22:04	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/01/17 22:04	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/01/17 22:04	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/01/17 22:04	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/01/17 22:04	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/01/17 22:04	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/01/17 22:04	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/01/17 22:04	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/01/17 22:04	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/01/17 22:04	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/01/17 22:04	1
Methyl acetate	10	U	10	1.4	ug/L			08/01/17 22:04	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/01/17 22:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/01/17 22:04	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/01/17 22:04	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/01/17 22:04	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/01/17 22:04	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/01/17 22:04	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/01/17 22:04	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/01/17 22:04	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/01/17 22:04	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/01/17 22:04	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82739-13

Date Collected: 07/21/17 00:00

Matrix: Water

Date Received: 07/22/17 09:45

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	108		61 - 138		08/01/17 22:04	1
4-Bromofluorobenzene (Surr)	111		69 - 120		08/01/17 22:04	1
Toluene-d8 (Surr)	104		73 - 120		08/01/17 22:04	1
Dibromofluoromethane (Surr)	97		69 - 124		08/01/17 22:04	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (61-127)	BFB (61-132)	TOL (66-125)	DBFM (43-131)
240-82739-1	S-170720-RA-10	80	79	91	89
LCS 240-289079/4	Lab Control Sample	84	84	91	92
MB 240-289079/5	Method Blank	85	79	91	90

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (64-144)	BFB (58-142)	TOL (61-137)	DBFM (31-155)
240-82739-2	S-170720-RA-11	141	158 X	124	126
LCS 240-288461/2-A	Lab Control Sample	91	102	83	86
MB 240-288461/1-A	Method Blank	96	104	84	86

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (61-138)	BFB (69-120)	TOL (73-120)	DBFM (69-124)
240-82739-3	W-170721-RA-19	104	114	102	96
240-82739-4	W-170721-RA-20	105	116	103	98
240-82739-5	W-170721-RA-21	119	112	104	106
240-82739-6	W-170721-RA-22	103	107	103	95
240-82739-7	W-170721-RA-23	99	115	103	94
240-82739-8	W-170721-RA-24	104	107	103	97
240-82739-9	W-170721-RA-25	106	115	90	97
240-82739-10	W-170721-RA-26	102	113	104	97
240-82739-11	W-170721-RA-27	105	113	104	96
240-82739-12	W-170721-RA-28	107	113	104	96
240-82739-13	TRIP BLANK	108	111	104	97
LCS 240-288950/4	Lab Control Sample	101	119	111	97
LCS 240-289464/4	Lab Control Sample	100	117	109	96
LCS 240-289646/4	Lab Control Sample	103	114	108	97
MB 240-288950/6	Method Blank	109	111	104	99
MB 240-289464/6	Method Blank	105	109	105	96
MB 240-289646/6	Method Blank	102	109	107	96

TestAmerica Canton

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-288461/1-A

Matrix: Solid

Analysis Batch: 288594

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 288461

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1000	U	1000	97	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Benzene	250	U	250	24	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Dichlorobromomethane	250	U	250	18	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Bromoform	250	U	250	23	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Bromomethane	250	U	250	28	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
2-Butanone (MEK)	1000	U	1000	50	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Carbon disulfide	250	U	250	18	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Carbon tetrachloride	250	U	250	27	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Chlorobenzene	250	U	250	30	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Chloroethane	250	U	250	28	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Chloroform	250	U	250	24	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Chloromethane	250	U	250	18	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1-Dichloroethane	250	U	250	31	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,2-Dichloroethane	250	U	250	30	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1-Dichloroethene	250	U	250	36	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,2-Dichloropropane	250	U	250	30	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
cis-1,3-Dichloropropene	250	U	250	23	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
trans-1,3-Dichloropropene	250	U	250	15	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Ethylbenzene	250	U	250	35	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
2-Hexanone	1000	U	1000	86	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Methylene Chloride	282		250	65	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
4-Methyl-2-pentanone (MIBK)	1000	U	1000	40	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Styrene	250	U	250	10	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1,2,2-Tetrachloroethane	250	U	250	24	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Tetrachloroethene	250	U	250	21	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Toluene	250	U	250	24	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Trichloroethene	250	U	250	37	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Vinyl chloride	250	U	250	17	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Xylenes, Total	500	U	500	28	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1,1-Trichloroethane	250	U	250	28	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1,2-Trichloroethane	250	U	250	23	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Cyclohexane	500	U	500	30	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,2-Dibromo-3-Chloropropane	500	U	500	48	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Ethylene Dibromide	250	U	250	23	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Dichlorodifluoromethane	250	U	250	22	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
cis-1,2-Dichloroethene	250	U	250	35	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
trans-1,2-Dichloroethene	250	U	250	35	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Isopropylbenzene	250	U	250	34	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Methyl acetate	1300	U	1300	75	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Methyl tert-butyl ether	250	U	250	26	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	23	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,2,4-Trichlorobenzene	250	U	250	26	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,2-Dichlorobenzene	250	U	250	18	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,3-Dichlorobenzene	250	U	250	38	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
1,4-Dichlorobenzene	250	U	250	27	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Trichlorofluoromethane	250	U	250	34	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Chlorodibromomethane	250	U	250	34	ug/Kg		07/24/17 14:10	07/25/17 21:15	1
Methylcyclohexane	500	U	500	37	ug/Kg		07/24/17 14:10	07/25/17 21:15	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288461/1-A
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 288461

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	250	U	250	20	ug/Kg		07/24/17 14:10	07/25/17 21:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		64 - 144	07/24/17 14:10	07/25/17 21:15	1
4-Bromofluorobenzene (Surr)	104		58 - 142	07/24/17 14:10	07/25/17 21:15	1
Toluene-d8 (Surr)	84		61 - 137	07/24/17 14:10	07/25/17 21:15	1
Dibromofluoromethane (Surr)	86		31 - 155	07/24/17 14:10	07/25/17 21:15	1

Lab Sample ID: LCS 240-288461/2-A
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288461

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acetone	2000	1220		ug/Kg		61	24 - 125
Benzene	1000	929		ug/Kg		93	77 - 120
Dichlorobromomethane	1000	848		ug/Kg		85	61 - 132
Bromoform	1000	691		ug/Kg		69	40 - 140
Bromomethane	1000	334		ug/Kg		33	10 - 153
2-Butanone (MEK)	2000	1460		ug/Kg		73	51 - 120
Carbon disulfide	1000	598		ug/Kg		60	17 - 163
Carbon tetrachloride	1000	795		ug/Kg		79	43 - 144
Chlorobenzene	1000	924		ug/Kg		92	76 - 120
Chloroethane	1000	224	J	ug/Kg		22	10 - 166
Chloroform	1000	888		ug/Kg		89	74 - 120
Chloromethane	1000	800		ug/Kg		80	41 - 124
1,1-Dichloroethane	1000	954		ug/Kg		95	72 - 120
1,2-Dichloroethane	1000	872		ug/Kg		87	71 - 120
1,1-Dichloroethene	1000	648		ug/Kg		65	58 - 130
1,2-Dichloropropane	1000	1030		ug/Kg		103	78 - 122
cis-1,3-Dichloropropene	1000	923		ug/Kg		92	66 - 126
trans-1,3-Dichloropropene	1000	795		ug/Kg		80	55 - 121
Ethylbenzene	1000	912		ug/Kg		91	76 - 120
2-Hexanone	2000	1720		ug/Kg		86	52 - 129
Methylene Chloride	1000	1150		ug/Kg		115	64 - 126
4-Methyl-2-pentanone (MIBK)	2000	1600		ug/Kg		80	65 - 131
Styrene	1000	863		ug/Kg		86	80 - 120
1,1,2,2-Tetrachloroethane	1000	1090		ug/Kg		109	78 - 120
Tetrachloroethene	1000	834		ug/Kg		83	68 - 122
Toluene	1000	900		ug/Kg		90	74 - 120
Trichloroethene	1000	734		ug/Kg		73	73 - 123
Vinyl chloride	1000	754		ug/Kg		75	49 - 131
Xylenes, Total	2000	1880		ug/Kg		94	78 - 120
1,1,1-Trichloroethane	1000	882		ug/Kg		88	60 - 136
1,1,2-Trichloroethane	1000	878		ug/Kg		88	80 - 120
Cyclohexane	1000	975		ug/Kg		97	66 - 129
1,2-Dibromo-3-Chloropropane	1000	800		ug/Kg		80	40 - 133
Ethylene Dibromide	1000	825		ug/Kg		83	80 - 120
Dichlorodifluoromethane	1000	636		ug/Kg		64	15 - 127

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288461/2-A
Matrix: Solid
Analysis Batch: 288594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 288461

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	1000	872		ug/Kg		87	78 - 120
trans-1,2-Dichloroethene	1000	881		ug/Kg		88	74 - 124
Isopropylbenzene	1000	950		ug/Kg		95	76 - 124
Methyl acetate	2000	1640		ug/Kg		82	63 - 126
Methyl tert-butyl ether	1000	909		ug/Kg		91	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	682		ug/Kg		68	64 - 125
1,2,4-Trichlorobenzene	1000	782		ug/Kg		78	60 - 124
1,2-Dichlorobenzene	1000	905		ug/Kg		90	75 - 120
1,3-Dichlorobenzene	1000	896		ug/Kg		90	72 - 120
1,4-Dichlorobenzene	1000	873		ug/Kg		87	71 - 120
Trichlorofluoromethane	1000	630		ug/Kg		63	28 - 152
Chlorodibromomethane	1000	728		ug/Kg		73	46 - 125
Methylcyclohexane	1000	926		ug/Kg		93	71 - 126
m-Xylene & p-Xylene	1000	933		ug/Kg		93	78 - 120
o-Xylene	1000	946		ug/Kg		95	77 - 120
Naphthalene	1000	739		ug/Kg		74	68 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		64 - 144
4-Bromofluorobenzene (Surr)	102		58 - 142
Toluene-d8 (Surr)	83		61 - 137
Dibromofluoromethane (Surr)	86		31 - 155

Lab Sample ID: MB 240-288950/6
Matrix: Water
Analysis Batch: 288950

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			07/27/17 14:39	1
Benzene	1.0	U	1.0	0.28	ug/L			07/27/17 14:39	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			07/27/17 14:39	1
Bromoform	1.0	U	1.0	0.43	ug/L			07/27/17 14:39	1
Bromomethane	1.0	U	1.0	0.42	ug/L			07/27/17 14:39	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			07/27/17 14:39	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			07/27/17 14:39	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			07/27/17 14:39	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			07/27/17 14:39	1
Chloroethane	1.0	U	1.0	0.41	ug/L			07/27/17 14:39	1
Chloroform	1.0	U	1.0	0.31	ug/L			07/27/17 14:39	1
Chloromethane	1.0	U	1.0	0.43	ug/L			07/27/17 14:39	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			07/27/17 14:39	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			07/27/17 14:39	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			07/27/17 14:39	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			07/27/17 14:39	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			07/27/17 14:39	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			07/27/17 14:39	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			07/27/17 14:39	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-288950/6

Matrix: Water

Analysis Batch: 288950

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Hexanone	10	U	10	1.2	ug/L			07/27/17 14:39	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			07/27/17 14:39	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			07/27/17 14:39	1
Styrene	1.0	U	1.0	0.23	ug/L			07/27/17 14:39	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			07/27/17 14:39	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			07/27/17 14:39	1
Toluene	1.0	U	1.0	0.23	ug/L			07/27/17 14:39	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			07/27/17 14:39	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			07/27/17 14:39	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			07/27/17 14:39	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			07/27/17 14:39	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			07/27/17 14:39	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			07/27/17 14:39	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			07/27/17 14:39	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			07/27/17 14:39	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			07/27/17 14:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			07/27/17 14:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			07/27/17 14:39	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			07/27/17 14:39	1
Methyl acetate	10	U	10	1.4	ug/L			07/27/17 14:39	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			07/27/17 14:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			07/27/17 14:39	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			07/27/17 14:39	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			07/27/17 14:39	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			07/27/17 14:39	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			07/27/17 14:39	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			07/27/17 14:39	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			07/27/17 14:39	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			07/27/17 14:39	1
Naphthalene	1.0	U	1.0	0.25	ug/L			07/27/17 14:39	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	109		61 - 138		07/27/17 14:39	1
4-Bromofluorobenzene (Surr)	111		69 - 120		07/27/17 14:39	1
Toluene-d8 (Surr)	104		73 - 120		07/27/17 14:39	1
Dibromofluoromethane (Surr)	99		69 - 124		07/27/17 14:39	1

Lab Sample ID: LCS 240-288950/4

Matrix: Water

Analysis Batch: 288950

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Acetone	20.0	13.4		ug/L		67	35 - 131
Benzene	10.0	10.9		ug/L		109	79 - 120
Dichlorobromomethane	10.0	10.7		ug/L		107	79 - 125
Bromoform	10.0	8.97		ug/L		90	55 - 145
Bromomethane	10.0	10.3		ug/L		103	17 - 158
2-Butanone (MEK)	20.0	19.4		ug/L		97	43 - 149

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288950/4

Matrix: Water

Analysis Batch: 288950

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	10.0	11.0		ug/L		110	49 - 141
Carbon tetrachloride	10.0	9.71		ug/L		97	55 - 171
Chlorobenzene	10.0	10.6		ug/L		106	80 - 120
Chloroethane	10.0	9.18		ug/L		92	10 - 149
Chloroform	10.0	10.4		ug/L		104	80 - 120
Chloromethane	10.0	11.3		ug/L		113	59 - 124
1,1-Dichloroethane	10.0	11.2		ug/L		112	74 - 120
1,2-Dichloroethane	10.0	10.6		ug/L		106	68 - 133
1,1-Dichloroethene	10.0	9.91		ug/L		99	65 - 127
1,2-Dichloropropane	10.0	11.7		ug/L		117	78 - 127
cis-1,3-Dichloropropene	10.0	11.1		ug/L		111	75 - 120
trans-1,3-Dichloropropene	10.0	11.2		ug/L		112	67 - 120
Ethylbenzene	10.0	10.4		ug/L		104	80 - 120
2-Hexanone	20.0	20.8		ug/L		104	28 - 169
Methylene Chloride	10.0	10.4		ug/L		104	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	23.6		ug/L		118	53 - 144
Styrene	10.0	11.0		ug/L		110	80 - 121
1,1,2,2-Tetrachloroethane	10.0	9.00		ug/L		90	58 - 122
Tetrachloroethene	10.0	8.87		ug/L		89	80 - 122
Toluene	10.0	10.7		ug/L		107	78 - 120
Trichloroethene	10.0	9.17		ug/L		92	76 - 124
Vinyl chloride	10.0	9.39		ug/L		94	65 - 124
Xylenes, Total	20.0	21.2		ug/L		106	80 - 120
1,1,1-Trichloroethane	10.0	9.81		ug/L		98	64 - 147
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	76 - 121
Cyclohexane	10.0	11.0		ug/L		110	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	8.12		ug/L		81	50 - 130
Ethylene Dibromide	10.0	10.2		ug/L		102	80 - 120
Dichlorodifluoromethane	10.0	8.97		ug/L		90	42 - 141
cis-1,2-Dichloroethene	10.0	10.1		ug/L		101	77 - 120
trans-1,2-Dichloroethene	10.0	10.2		ug/L		102	74 - 124
Isopropylbenzene	10.0	10.6		ug/L		106	80 - 128
Methyl acetate	20.0	22.2		ug/L		111	63 - 137
Methyl tert-butyl ether	10.0	10.9		ug/L		109	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.55		ug/L		96	65 - 144
1,2,4-Trichlorobenzene	10.0	8.44		ug/L		84	34 - 141
1,2-Dichlorobenzene	10.0	9.78		ug/L		98	80 - 120
1,3-Dichlorobenzene	10.0	9.56		ug/L		96	80 - 120
1,4-Dichlorobenzene	10.0	10.1		ug/L		101	80 - 120
Trichlorofluoromethane	10.0	11.5		ug/L		115	27 - 176
Chlorodibromomethane	10.0	9.76		ug/L		98	64 - 129
Methylcyclohexane	10.0	9.24		ug/L		92	63 - 141
m-Xylene & p-Xylene	10.0	10.6		ug/L		106	80 - 120
o-Xylene	10.0	10.6		ug/L		106	80 - 120
Naphthalene	10.0	6.61		ug/L		66	31 - 127

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-288950/4
Matrix: Water
Analysis Batch: 288950

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		61 - 138
4-Bromofluorobenzene (Surr)	119		69 - 120
Toluene-d8 (Surr)	111		73 - 120
Dibromofluoromethane (Surr)	97		69 - 124

Lab Sample ID: MB 240-289079/5
Matrix: Solid
Analysis Batch: 289079

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Acetone	15.5	J	20	3.1	ug/Kg			07/28/17 11:40	1	
Benzene	5.0	U	5.0	0.32	ug/Kg			07/28/17 11:40	1	
Dichlorobromomethane	5.0	U	5.0	0.33	ug/Kg			07/28/17 11:40	1	
Bromoform	5.0	U	5.0	0.40	ug/Kg			07/28/17 11:40	1	
Bromomethane	5.0	U	5.0	0.59	ug/Kg			07/28/17 11:40	1	
2-Butanone (MEK)	2.95	J	20	1.3	ug/Kg			07/28/17 11:40	1	
Carbon disulfide	5.0	U	5.0	0.21	ug/Kg			07/28/17 11:40	1	
Carbon tetrachloride	5.0	U	5.0	0.25	ug/Kg			07/28/17 11:40	1	
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			07/28/17 11:40	1	
Chloroethane	5.0	U	5.0	0.38	ug/Kg			07/28/17 11:40	1	
Chloroform	5.0	U	5.0	0.23	ug/Kg			07/28/17 11:40	1	
Chloromethane	5.0	U	5.0	0.38	ug/Kg			07/28/17 11:40	1	
1,1-Dichloroethane	5.0	U	5.0	0.33	ug/Kg			07/28/17 11:40	1	
1,2-Dichloroethane	5.0	U	5.0	0.29	ug/Kg			07/28/17 11:40	1	
1,1-Dichloroethene	5.0	U	5.0	0.54	ug/Kg			07/28/17 11:40	1	
1,2-Dichloropropane	5.0	U	5.0	0.31	ug/Kg			07/28/17 11:40	1	
cis-1,3-Dichloropropene	5.0	U	5.0	0.26	ug/Kg			07/28/17 11:40	1	
trans-1,3-Dichloropropene	5.0	U	5.0	0.21	ug/Kg			07/28/17 11:40	1	
Ethylbenzene	5.0	U	5.0	0.27	ug/Kg			07/28/17 11:40	1	
2-Hexanone	20	U	20	0.58	ug/Kg			07/28/17 11:40	1	
Methylene Chloride	0.777	J	5.0	0.24	ug/Kg			07/28/17 11:40	1	
4-Methyl-2-pentanone (MIBK)	20	U	20	0.89	ug/Kg			07/28/17 11:40	1	
Styrene	5.0	U	5.0	0.27	ug/Kg			07/28/17 11:40	1	
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.26	ug/Kg			07/28/17 11:40	1	
Tetrachloroethene	5.0	U	5.0	0.37	ug/Kg			07/28/17 11:40	1	
Toluene	5.0	U	5.0	0.34	ug/Kg			07/28/17 11:40	1	
Trichloroethene	5.0	U	5.0	0.41	ug/Kg			07/28/17 11:40	1	
Vinyl chloride	5.0	U	5.0	0.28	ug/Kg			07/28/17 11:40	1	
Xylenes, Total	10	U	10	0.40	ug/Kg			07/28/17 11:40	1	
1,1,1-Trichloroethane	5.0	U	5.0	0.23	ug/Kg			07/28/17 11:40	1	
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			07/28/17 11:40	1	
Cyclohexane	10	U	10	0.21	ug/Kg			07/28/17 11:40	1	
1,2-Dibromo-3-Chloropropane	10	U	10	0.68	ug/Kg			07/28/17 11:40	1	
Ethylene Dibromide	5.0	U	5.0	0.35	ug/Kg			07/28/17 11:40	1	
Dichlorodifluoromethane	5.0	U	5.0	0.35	ug/Kg			07/28/17 11:40	1	
cis-1,2-Dichloroethene	5.0	U	5.0	0.28	ug/Kg			07/28/17 11:40	1	
trans-1,2-Dichloroethene	5.0	U	5.0	0.38	ug/Kg			07/28/17 11:40	1	
Isopropylbenzene	5.0	U	5.0	0.20	ug/Kg			07/28/17 11:40	1	

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-289079/5
Matrix: Solid
Analysis Batch: 289079

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	25	U	25	1.2	ug/Kg			07/28/17 11:40	1
Methyl tert-butyl ether	5.0	U	5.0	0.27	ug/Kg			07/28/17 11:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	0.49	ug/Kg			07/28/17 11:40	1
1,2,4-Trichlorobenzene	0.589	J	5.0	0.24	ug/Kg			07/28/17 11:40	1
1,2-Dichlorobenzene	0.257	J	5.0	0.22	ug/Kg			07/28/17 11:40	1
1,3-Dichlorobenzene	5.0	U	5.0	0.29	ug/Kg			07/28/17 11:40	1
1,4-Dichlorobenzene	5.0	U	5.0	0.35	ug/Kg			07/28/17 11:40	1
Trichlorofluoromethane	5.0	U	5.0	0.24	ug/Kg			07/28/17 11:40	1
Chlorodibromomethane	5.0	U	5.0	0.30	ug/Kg			07/28/17 11:40	1
Methylcyclohexane	10	U	10	0.23	ug/Kg			07/28/17 11:40	1
Naphthalene	0.634	J	5.0	0.33	ug/Kg			07/28/17 11:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		61 - 127		07/28/17 11:40	1
4-Bromofluorobenzene (Surr)	79		61 - 132		07/28/17 11:40	1
Toluene-d8 (Surr)	91		66 - 125		07/28/17 11:40	1
Dibromofluoromethane (Surr)	90		43 - 131		07/28/17 11:40	1

Lab Sample ID: LCS 240-289079/4
Matrix: Solid
Analysis Batch: 289079

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	93.8		ug/Kg		94	24 - 125
Benzene	50.0	43.2		ug/Kg		86	77 - 120
Dichlorobromomethane	50.0	45.5		ug/Kg		91	61 - 132
Bromoform	50.0	45.9		ug/Kg		92	40 - 140
Bromomethane	20.0	16.3		ug/Kg		82	10 - 153
2-Butanone (MEK)	100	104		ug/Kg		104	51 - 120
Carbon disulfide	50.0	43.5		ug/Kg		87	17 - 163
Carbon tetrachloride	50.0	42.4		ug/Kg		85	43 - 144
Chlorobenzene	50.0	41.7		ug/Kg		83	76 - 120
Chloroethane	20.0	15.9		ug/Kg		79	10 - 166
Chloroform	50.0	43.1		ug/Kg		86	74 - 120
Chloromethane	20.0	18.3		ug/Kg		91	41 - 124
1,1-Dichloroethane	50.0	42.8		ug/Kg		86	72 - 120
1,2-Dichloroethane	50.0	44.3		ug/Kg		89	71 - 120
1,1-Dichloroethene	50.0	45.4		ug/Kg		91	58 - 130
1,2-Dichloropropane	50.0	45.4		ug/Kg		91	78 - 122
cis-1,3-Dichloropropene	50.0	45.3		ug/Kg		91	66 - 126
trans-1,3-Dichloropropene	50.0	36.1		ug/Kg		72	55 - 121
Ethylbenzene	50.0	42.3		ug/Kg		85	76 - 120
2-Hexanone	100	95.0		ug/Kg		95	52 - 129
Methylene Chloride	50.0	44.3		ug/Kg		89	64 - 126
4-Methyl-2-pentanone (MIBK)	100	94.5		ug/Kg		94	65 - 131
Styrene	50.0	42.6		ug/Kg		85	80 - 120
1,1,2,2-Tetrachloroethane	50.0	44.0		ug/Kg		88	78 - 120
Tetrachloroethene	50.0	42.6		ug/Kg		85	68 - 122

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-289079/4
Matrix: Solid
Analysis Batch: 289079

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	50.0	41.1		ug/Kg		82	74 - 120
Trichloroethene	50.0	45.0		ug/Kg		90	73 - 123
Vinyl chloride	20.0	17.0		ug/Kg		85	49 - 131
Xylenes, Total	100	85.1		ug/Kg		85	78 - 120
1,1,1-Trichloroethane	50.0	44.4		ug/Kg		89	60 - 136
1,1,2-Trichloroethane	50.0	44.0		ug/Kg		88	80 - 120
Cyclohexane	50.0	44.9		ug/Kg		90	66 - 129
1,2-Dibromo-3-Chloropropane	50.0	41.4		ug/Kg		83	40 - 133
Ethylene Dibromide	50.0	44.8		ug/Kg		90	80 - 120
Dichlorodifluoromethane	20.0	20.1		ug/Kg		100	15 - 127
cis-1,2-Dichloroethene	50.0	43.2		ug/Kg		86	78 - 120
trans-1,2-Dichloroethene	50.0	45.2		ug/Kg		90	74 - 124
Isopropylbenzene	50.0	43.9		ug/Kg		88	76 - 124
Methyl acetate	100	89.8		ug/Kg		90	63 - 126
Methyl tert-butyl ether	50.0	44.8		ug/Kg		90	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	44.0		ug/Kg		88	64 - 125
1,2,4-Trichlorobenzene	50.0	39.3		ug/Kg		79	60 - 124
1,2-Dichlorobenzene	50.0	40.4		ug/Kg		81	75 - 120
1,3-Dichlorobenzene	50.0	40.1		ug/Kg		80	72 - 120
1,4-Dichlorobenzene	50.0	39.7		ug/Kg		79	71 - 120
Trichlorofluoromethane	20.0	17.5		ug/Kg		88	28 - 152
Chlorodibromomethane	50.0	45.1		ug/Kg		90	46 - 125
Methylcyclohexane	50.0	43.4		ug/Kg		87	71 - 126
m-Xylene & p-Xylene	50.0	42.3		ug/Kg		85	78 - 120
o-Xylene	50.0	42.8		ug/Kg		86	77 - 120
Naphthalene	50.0	42.8		ug/Kg		86	68 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	84		61 - 127
4-Bromofluorobenzene (Surr)	84		61 - 132
Toluene-d8 (Surr)	91		66 - 125
Dibromofluoromethane (Surr)	92		43 - 131

Lab Sample ID: MB 240-289464/6
Matrix: Water
Analysis Batch: 289464

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/01/17 13:46	1
Benzene	1.0	U	1.0	0.28	ug/L			08/01/17 13:46	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/01/17 13:46	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/01/17 13:46	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/01/17 13:46	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/01/17 13:46	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/01/17 13:46	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/01/17 13:46	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/01/17 13:46	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-289464/6

Matrix: Water

Analysis Batch: 289464

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloroethane	1.0	U	1.0	0.41	ug/L			08/01/17 13:46	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/01/17 13:46	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/01/17 13:46	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/01/17 13:46	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/01/17 13:46	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/01/17 13:46	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/01/17 13:46	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/01/17 13:46	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/01/17 13:46	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/01/17 13:46	1
2-Hexanone	10	U	10	1.2	ug/L			08/01/17 13:46	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/01/17 13:46	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/01/17 13:46	1
Styrene	1.0	U	1.0	0.23	ug/L			08/01/17 13:46	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/01/17 13:46	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/01/17 13:46	1
Toluene	1.0	U	1.0	0.23	ug/L			08/01/17 13:46	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/01/17 13:46	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/01/17 13:46	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/01/17 13:46	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/01/17 13:46	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/01/17 13:46	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/01/17 13:46	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/01/17 13:46	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/01/17 13:46	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/01/17 13:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/01/17 13:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/01/17 13:46	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/01/17 13:46	1
Methyl acetate	10	U	10	1.4	ug/L			08/01/17 13:46	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/01/17 13:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/01/17 13:46	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/01/17 13:46	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/01/17 13:46	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/01/17 13:46	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/01/17 13:46	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/01/17 13:46	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/01/17 13:46	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/01/17 13:46	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/01/17 13:46	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	105		61 - 138		08/01/17 13:46	1
4-Bromofluorobenzene (Surr)	109		69 - 120		08/01/17 13:46	1
Toluene-d8 (Surr)	105		73 - 120		08/01/17 13:46	1
Dibromofluoromethane (Surr)	96		69 - 124		08/01/17 13:46	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-289464/4

Matrix: Water

Analysis Batch: 289464

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	12.9		ug/L		65	35 - 131
Benzene	10.0	10.9		ug/L		109	79 - 120
Dichlorobromomethane	10.0	10.9		ug/L		109	79 - 125
Bromoform	10.0	8.96		ug/L		90	55 - 145
Bromomethane	10.0	9.32		ug/L		93	17 - 158
2-Butanone (MEK)	20.0	18.9		ug/L		94	43 - 149
Carbon disulfide	10.0	11.5		ug/L		115	49 - 141
Carbon tetrachloride	10.0	9.60		ug/L		96	55 - 171
Chlorobenzene	10.0	10.3		ug/L		103	80 - 120
Chloroethane	10.0	7.22		ug/L		72	10 - 149
Chloroform	10.0	10.4		ug/L		104	80 - 120
Chloromethane	10.0	11.0		ug/L		110	59 - 124
1,1-Dichloroethane	10.0	11.1		ug/L		111	74 - 120
1,2-Dichloroethane	10.0	10.7		ug/L		107	68 - 133
1,1-Dichloroethene	10.0	10.1		ug/L		101	65 - 127
1,2-Dichloropropane	10.0	11.9		ug/L		119	78 - 127
cis-1,3-Dichloropropene	10.0	11.4		ug/L		114	75 - 120
trans-1,3-Dichloropropene	10.0	11.4		ug/L		114	67 - 120
Ethylbenzene	10.0	10.4		ug/L		104	80 - 120
2-Hexanone	20.0	21.6		ug/L		108	28 - 169
Methylene Chloride	10.0	11.1		ug/L		111	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	23.7		ug/L		118	53 - 144
Styrene	10.0	10.8		ug/L		108	80 - 121
1,1,2,2-Tetrachloroethane	10.0	11.1		ug/L		111	58 - 122
Tetrachloroethene	10.0	8.88		ug/L		89	80 - 122
Toluene	10.0	10.8		ug/L		108	78 - 120
Trichloroethene	10.0	8.88		ug/L		89	76 - 124
Vinyl chloride	10.0	9.29		ug/L		93	65 - 124
Xylenes, Total	20.0	21.3		ug/L		107	80 - 120
1,1,1-Trichloroethane	10.0	9.94		ug/L		99	64 - 147
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	76 - 121
Cyclohexane	10.0	11.3		ug/L		113	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	8.51		ug/L		85	50 - 130
Ethylene Dibromide	10.0	9.90		ug/L		99	80 - 120
Dichlorodifluoromethane	10.0	8.66		ug/L		87	42 - 141
cis-1,2-Dichloroethene	10.0	10.3		ug/L		103	77 - 120
trans-1,2-Dichloroethene	10.0	10.4		ug/L		104	74 - 124
Isopropylbenzene	10.0	10.6		ug/L		106	80 - 128
Methyl acetate	20.0	22.0		ug/L		110	63 - 137
Methyl tert-butyl ether	10.0	11.2		ug/L		112	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.95		ug/L		100	65 - 144
1,2,4-Trichlorobenzene	10.0	8.60		ug/L		86	34 - 141
1,2-Dichlorobenzene	10.0	9.74		ug/L		97	80 - 120
1,3-Dichlorobenzene	10.0	9.62		ug/L		96	80 - 120
1,4-Dichlorobenzene	10.0	9.89		ug/L		99	80 - 120
Trichlorofluoromethane	10.0	11.4		ug/L		114	27 - 176
Chlorodibromomethane	10.0	9.67		ug/L		97	64 - 129

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-289464/4
Matrix: Water
Analysis Batch: 289464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylcyclohexane	10.0	9.44		ug/L		94	63 - 141
m-Xylene & p-Xylene	10.0	10.8		ug/L		108	80 - 120
o-Xylene	10.0	10.5		ug/L		105	80 - 120
Naphthalene	10.0	8.45		ug/L		85	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		61 - 138
4-Bromofluorobenzene (Surr)	117		69 - 120
Toluene-d8 (Surr)	109		73 - 120
Dibromofluoromethane (Surr)	96		69 - 124

Lab Sample ID: MB 240-289646/6
Matrix: Water
Analysis Batch: 289646

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/02/17 13:56	1
Benzene	1.0	U	1.0	0.28	ug/L			08/02/17 13:56	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/02/17 13:56	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/02/17 13:56	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/02/17 13:56	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/02/17 13:56	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/02/17 13:56	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/02/17 13:56	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/02/17 13:56	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/02/17 13:56	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/02/17 13:56	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/02/17 13:56	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/02/17 13:56	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/02/17 13:56	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/02/17 13:56	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/02/17 13:56	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/02/17 13:56	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/02/17 13:56	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/02/17 13:56	1
2-Hexanone	10	U	10	1.2	ug/L			08/02/17 13:56	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/02/17 13:56	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/02/17 13:56	1
Styrene	1.0	U	1.0	0.23	ug/L			08/02/17 13:56	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/02/17 13:56	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/02/17 13:56	1
Toluene	1.0	U	1.0	0.23	ug/L			08/02/17 13:56	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/02/17 13:56	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/02/17 13:56	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/02/17 13:56	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/02/17 13:56	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/02/17 13:56	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/02/17 13:56	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-289646/6
Matrix: Water
Analysis Batch: 289646

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/02/17 13:56	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/02/17 13:56	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/02/17 13:56	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/02/17 13:56	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/02/17 13:56	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/02/17 13:56	1
Methyl acetate	10	U	10	1.4	ug/L			08/02/17 13:56	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/02/17 13:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/02/17 13:56	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/02/17 13:56	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/02/17 13:56	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/02/17 13:56	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/02/17 13:56	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/02/17 13:56	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/02/17 13:56	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/02/17 13:56	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/02/17 13:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		61 - 138		08/02/17 13:56	1
4-Bromofluorobenzene (Surr)	109		69 - 120		08/02/17 13:56	1
Toluene-d8 (Surr)	107		73 - 120		08/02/17 13:56	1
Dibromofluoromethane (Surr)	96		69 - 124		08/02/17 13:56	1

Lab Sample ID: LCS 240-289646/4
Matrix: Water
Analysis Batch: 289646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	13.0		ug/L		65	35 - 131
Benzene	10.0	10.9		ug/L		109	79 - 120
Dichlorobromomethane	10.0	10.8		ug/L		108	79 - 125
Bromoform	10.0	8.93		ug/L		89	55 - 145
Bromomethane	10.0	8.34		ug/L		83	17 - 158
2-Butanone (MEK)	20.0	17.7		ug/L		89	43 - 149
Carbon disulfide	10.0	11.4		ug/L		114	49 - 141
Carbon tetrachloride	10.0	9.59		ug/L		96	55 - 171
Chlorobenzene	10.0	10.1		ug/L		101	80 - 120
Chloroethane	10.0	6.41		ug/L		64	10 - 149
Chloroform	10.0	10.4		ug/L		104	80 - 120
Chloromethane	10.0	9.71		ug/L		97	59 - 124
1,1-Dichloroethane	10.0	11.2		ug/L		112	74 - 120
1,2-Dichloroethane	10.0	10.6		ug/L		106	68 - 133
1,1-Dichloroethene	10.0	9.79		ug/L		98	65 - 127
1,2-Dichloropropane	10.0	12.0		ug/L		120	78 - 127
cis-1,3-Dichloropropene	10.0	11.3		ug/L		113	75 - 120
trans-1,3-Dichloropropene	10.0	11.0		ug/L		110	67 - 120
Ethylbenzene	10.0	9.80		ug/L		98	80 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-289646/4

Matrix: Water

Analysis Batch: 289646

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	20.0	20.8		ug/L		104	28 - 169
Methylene Chloride	10.0	10.6		ug/L		106	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	24.0		ug/L		120	53 - 144
Styrene	10.0	10.5		ug/L		105	80 - 121
1,1,2,2-Tetrachloroethane	10.0	12.1		ug/L		121	58 - 122
Tetrachloroethene	10.0	8.41		ug/L		84	80 - 122
Toluene	10.0	10.7		ug/L		107	78 - 120
Trichloroethene	10.0	9.06		ug/L		91	76 - 124
Vinyl chloride	10.0	8.43		ug/L		84	65 - 124
Xylenes, Total	20.0	20.6		ug/L		103	80 - 120
1,1,1-Trichloroethane	10.0	9.97		ug/L		100	64 - 147
1,1,2-Trichloroethane	10.0	10.4		ug/L		104	76 - 121
Cyclohexane	10.0	11.3		ug/L		113	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	8.02		ug/L		80	50 - 130
Ethylene Dibromide	10.0	9.95		ug/L		99	80 - 120
Dichlorodifluoromethane	10.0	6.89		ug/L		69	42 - 141
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	77 - 120
trans-1,2-Dichloroethene	10.0	10.4		ug/L		104	74 - 124
Isopropylbenzene	10.0	10.1		ug/L		101	80 - 128
Methyl acetate	20.0	21.8		ug/L		109	63 - 137
Methyl tert-butyl ether	10.0	11.0		ug/L		110	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.82		ug/L		98	65 - 144
1,2,4-Trichlorobenzene	10.0	9.55		ug/L		95	34 - 141
1,2-Dichlorobenzene	10.0	9.65		ug/L		97	80 - 120
1,3-Dichlorobenzene	10.0	9.89		ug/L		99	80 - 120
1,4-Dichlorobenzene	10.0	9.92		ug/L		99	80 - 120
Trichlorofluoromethane	10.0	11.0		ug/L		110	27 - 176
Chlorodibromomethane	10.0	9.55		ug/L		95	64 - 129
Methylcyclohexane	10.0	9.12		ug/L		91	63 - 141
m-Xylene & p-Xylene	10.0	10.3		ug/L		103	80 - 120
o-Xylene	10.0	10.3		ug/L		103	80 - 120
Naphthalene	10.0	8.99		ug/L		90	31 - 127

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	103		61 - 138
4-Bromofluorobenzene (Surr)	114		69 - 120
Toluene-d8 (Surr)	108		73 - 120
Dibromofluoromethane (Surr)	97		69 - 124

QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

GC/MS VOA

Prep Batch: 288461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82739-2	S-170720-RA-11	Total/NA	Solid	5035	
MB 240-288461/1-A	Method Blank	Total/NA	Solid	5035	
LCS 240-288461/2-A	Lab Control Sample	Total/NA	Solid	5035	

Prep Batch: 288478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82739-1	S-170720-RA-10	Total/NA	Solid	5035	

Analysis Batch: 288594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-288461/1-A	Method Blank	Total/NA	Solid	8260B	288461
LCS 240-288461/2-A	Lab Control Sample	Total/NA	Solid	8260B	288461

Analysis Batch: 288921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82739-2	S-170720-RA-11	Total/NA	Solid	8260B	288461

Analysis Batch: 288950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82739-3	W-170721-RA-19	Total/NA	Water	8260B	
240-82739-4	W-170721-RA-20	Total/NA	Water	8260B	
240-82739-5	W-170721-RA-21	Total/NA	Water	8260B	
240-82739-9	W-170721-RA-25	Total/NA	Water	8260B	
MB 240-288950/6	Method Blank	Total/NA	Water	8260B	
LCS 240-288950/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 289079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82739-1	S-170720-RA-10	Total/NA	Solid	8260B	288478
MB 240-289079/5	Method Blank	Total/NA	Solid	8260B	
LCS 240-289079/4	Lab Control Sample	Total/NA	Solid	8260B	

Analysis Batch: 289464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82739-10	W-170721-RA-26	Total/NA	Water	8260B	
240-82739-11	W-170721-RA-27	Total/NA	Water	8260B	
240-82739-12	W-170721-RA-28	Total/NA	Water	8260B	
240-82739-13	TRIP BLANK	Total/NA	Water	8260B	
MB 240-289464/6	Method Blank	Total/NA	Water	8260B	
LCS 240-289464/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 289646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82739-6	W-170721-RA-22	Total/NA	Water	8260B	
240-82739-7	W-170721-RA-23	Total/NA	Water	8260B	
240-82739-8	W-170721-RA-24	Total/NA	Water	8260B	
MB 240-289646/6	Method Blank	Total/NA	Water	8260B	
LCS 240-289646/4	Lab Control Sample	Total/NA	Water	8260B	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

General Chemistry

Analysis Batch: 288356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82739-1	S-170720-RA-10	Total/NA	Solid	Moisture	
240-82739-2	S-170720-RA-11	Total/NA	Solid	Moisture	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: S-170720-RA-10

Date Collected: 07/20/17 14:50

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	288356	07/24/17 08:45	PW	TAL CAN

Client Sample ID: S-170720-RA-10

Date Collected: 07/20/17 14:50

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-1

Matrix: Solid

Percent Solids: 90.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			288478	07/22/17 15:55	LAM	TAL CAN
Total/NA	Analysis	8260B		1	289079	07/28/17 16:19	SAM	TAL CAN

Client Sample ID: S-170720-RA-11

Date Collected: 07/20/17 15:00

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	288356	07/24/17 08:45	PW	TAL CAN

Client Sample ID: S-170720-RA-11

Date Collected: 07/20/17 15:00

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-2

Matrix: Solid

Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			288461	07/24/17 14:10	LAM	TAL CAN
Total/NA	Analysis	8260B		1	288921	07/27/17 13:41	SAM	TAL CAN

Client Sample ID: W-170721-RA-19

Date Collected: 07/21/17 08:50

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	288950	07/27/17 22:20	LRW	TAL CAN

Client Sample ID: W-170721-RA-20

Date Collected: 07/21/17 09:45

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	288950	07/27/17 22:42	LRW	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-21

Date Collected: 07/21/17 10:20

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		8	288950	07/27/17 23:04	LRW	TAL CAN

Client Sample ID: W-170721-RA-22

Date Collected: 07/21/17 11:00

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	289646	08/02/17 15:02	LRW	TAL CAN

Client Sample ID: W-170721-RA-23

Date Collected: 07/21/17 11:50

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2.5	289646	08/02/17 15:24	LRW	TAL CAN

Client Sample ID: W-170721-RA-24

Date Collected: 07/21/17 12:05

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	289646	08/02/17 14:38	LRW	TAL CAN

Client Sample ID: W-170721-RA-25

Date Collected: 07/21/17 11:35

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	288950	07/27/17 23:25	LRW	TAL CAN

Client Sample ID: W-170721-RA-26

Date Collected: 07/21/17 12:00

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	289464	08/01/17 16:57	LRW	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Client Sample ID: W-170721-RA-27

Date Collected: 07/21/17 12:15

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	289464	08/01/17 17:19	LRW	TAL CAN

Client Sample ID: W-170721-RA-28

Date Collected: 07/21/17 13:50

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	289464	08/01/17 21:42	LRW	TAL CAN

Client Sample ID: TRIP BLANK

Date Collected: 07/21/17 00:00

Date Received: 07/22/17 09:45

Lab Sample ID: 240-82739-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	289464	08/01/17 22:04	LRW	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
 Project/Site: 88751, Hinshawn & Culbertson

TestAmerica Job ID: 240-82739-1

Laboratory: TestAmerica Canton

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	999518190	08-31-17 *

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	Cyclohexane
8260B		Water	Methyl acetate
8260B		Water	Methylcyclohexane
8260B	5035	Solid	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B	5035	Solid	Cyclohexane
8260B	5035	Solid	Methyl acetate
8260B	5035	Solid	Methylcyclohexane
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

* Accreditation/Certification renewal pending - accreditation/certification considered valid.



CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States

Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: **SP-02425**

PAGE 1 OF 1

(See Reverse Side for Instructions)

2.5/C2.5

Project No/ Phase/Task Code: <u>88751</u>				Laboratory Name: <u>Let America</u>				Lab Location:				SSOW ID:																			
Project Name: <u>6714 Walker St</u>				Lab Contact:				Lab Quote No:				Cooler No:																			
Project Location: <u>SLP</u>				SAMPLE TYPE				CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)				Carrier:															
Chemistry Contact: <u>G. Anderson</u>				Matrix Code (see back of COC) Grab (G) or Comp (C)				Unpreserved Hydrochloric Acid (HCl) Nitric Acid (HNO ₃) Sulfuric Acid (H ₂ SO ₄) Sodium Hydroxide (NaOH) Methanol/Water (Soil VOC) EnCores 3x5-g, 1x25-g Other:				Total Containers/Sample <u>50</u>				Airbill No:															
Sampler(s): <u>Patricia K Jenkin</u>																Date Shipped:															
Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)			DATE (mm/dd/yy)	TIME (hh:mm)	Matrix Code	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	MS/MSD Request	COMMENTS/ SPECIAL INSTRUCTIONS:													
1	S-170720-Rt-10			7/24/17	1450	SO	G						3			3															
2	S-170720-Rt-11			7/24/17	1500	SO							3			3															
3	W-170721-Rt-19			7/21/17	850	W6			3							3															
4	Rt-20				915				3							3															
5	Rt-21				1020				3							3															
6	Rt-22				1100				3							3															
7	Rt-23				1150				3							3															
8	Rt-24				1205				3							3															
9	Rt-25				1135				3							3															
10	Rt-26				1200				3							3															
11	W-170721-Rt-27				1215				3							3															
12	W-170721-Rt-28				1350				3							3															
13	Top blank																														
14																															
15																															
TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:								Total Number of Containers: <u>37</u>				Notes/ Special Requirements:																			
All Samples in Cooler must be on COC																															
RELINQUISHED BY				COMPANY				DATE				TIME				RECEIVED BY				COMPANY				DATE				TIME			
1. <u>[Signature]</u>				GAD				7/21/17				1600				1. POP				TAL				7-22-17				945			
2.																2.															
3.																3.															



THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY



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8/3/2017

TestAmerica Canton Sample Receipt Form/Narrative

Login #: 82739

Canton Facility

Client CRA Site Name

Cooler unpacked by:

Cooler Received on 7-22-17 Opened on 7-22-17

POP

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other
Packing material used: Bubble Wrap Foam Plastic Bag None Other
COOLANT: Wet Ice Blue Ice Dry Ice Water None

- 1. Cooler temperature upon receipt
IR GUN# IR-8 (CF -0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
IR GUN #36 (CF +0°C) Observed Cooler Temp. 2.5 °C Corrected Cooler Temp. 2.5 °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity Yes No
-Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
If yes, Questions 11-15 have been checked at the originating laboratory.
11. Were sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# HC697954
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Larger than this. Yes No NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B61520163 Yes No
15. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM Date by via Verbal Voice Mail Other

Concerning

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Blank lines for Chain of Custody and Sample Discrepancies.

17. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-82983-1

Client Project/Site: 88751, Hinshaw & Culbertson

Revision: 1

For:

GHD Services Inc.

1801 Old Highway 8 NW

Suite 114

St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson



Authorized for release by:

8/14/2017 2:47:18 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Job ID: 240-82983-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-82983-1

Comments

A revised report was provided on August 14, 2017. The sample ID for the soil was corrected.

Receipt

The samples were received on 7/28/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7° C.

GC/MS VOA

Method(s) 8260B: Surrogate recovery for the following sample was outside of acceptance limits: W-170726-RA-12 (240-82983-13). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-289326 and analytical batch 240-289521 on this sample S-170726-RA-12 (240-82983-13).

Method(s) 8260B: The pH of the samples was greater than 2. The samples were analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably, Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2. The following samples are impacted: W-170726-RA-29 (240-82983-1), W-170726-RA-31 (240-82983-3), W-170727-RA-34 (240-82983-8), W-170727-RA-35 (240-82983-9), W-170727-RA-36 (240-82983-10) and W-170727-RA-37 (240-82983-11).

Method(s) 8260B: No MS/MSD in batch 290477 due to analyst error. The following samples are impacted: W-170727-RA-37 (240-82983-11) and W-170726-RA-32 (240-82983-12).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

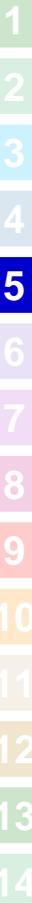
Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-82983-1	W-170726-RA-29	Water	07/26/17 12:00	07/28/17 09:30
240-82983-2	W-170726-RA-30	Water	07/26/17 12:30	07/28/17 09:30
240-82983-3	W-170726-RA-31	Water	07/26/17 13:50	07/28/17 09:30
240-82983-4	W-170727-RA-39	Water	07/27/17 09:20	07/28/17 09:30
240-82983-5	W-170727-RA-40	Water	07/27/17 09:20	07/28/17 09:30
240-82983-6	W-170727-RA-41	Water	07/27/17 10:15	07/28/17 09:30
240-82983-7	W-170727-RA-42	Water	07/27/17 10:15	07/28/17 09:30
240-82983-8	W-170727-RA-34	Water	07/27/17 09:10	07/28/17 09:30
240-82983-9	W-170727-RA-35	Water	07/27/17 10:00	07/28/17 09:30
240-82983-10	W-170727-RA-36	Water	07/27/17 10:55	07/28/17 09:30
240-82983-11	W-170727-RA-37	Water	07/27/17 13:20	07/28/17 09:30
240-82983-12	W-170726-RA-32	Water	07/26/17 14:10	07/28/17 09:30
240-82983-13	S-170726-RA-12	Solid	07/26/17 14:00	07/28/17 09:30
240-82983-14	TRIP BLANK	Water	07/26/17 00:00	07/28/17 09:30

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170726-RA-29

Lab Sample ID: 240-82983-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	9.0		6.7	1.9	ug/L	6.67		8260B	Total/NA
1,1-Dichloroethene	1.9	J	6.7	1.8	ug/L	6.67		8260B	Total/NA
Vinyl chloride	46		6.7	3.0	ug/L	6.67		8260B	Total/NA
cis-1,2-Dichloroethene	140		6.7	2.0	ug/L	6.67		8260B	Total/NA
trans-1,2-Dichloroethene	26		6.7	1.9	ug/L	6.67		8260B	Total/NA

Client Sample ID: W-170726-RA-30

Lab Sample ID: 240-82983-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	33		14	4.0	ug/L	14.29		8260B	Total/NA
Ethylbenzene	5.5	J	14	3.7	ug/L	14.29		8260B	Total/NA
Vinyl chloride	130		14	6.4	ug/L	14.29		8260B	Total/NA
cis-1,2-Dichloroethene	350		14	4.3	ug/L	14.29		8260B	Total/NA
trans-1,2-Dichloroethene	33		14	4.1	ug/L	14.29		8260B	Total/NA

Client Sample ID: W-170726-RA-31

Lab Sample ID: 240-82983-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	8900		500	150	ug/L	500		8260B	Total/NA
trans-1,2-Dichloroethene	270	J	500	150	ug/L	500		8260B	Total/NA

Client Sample ID: W-170727-RA-39

Lab Sample ID: 240-82983-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	290	B	250	130	ug/L	250		8260B	Total/NA
Tetrachloroethene	7200		250	75	ug/L	250		8260B	Total/NA

Client Sample ID: W-170727-RA-40

Lab Sample ID: 240-82983-5

No Detections.

Client Sample ID: W-170727-RA-41

Lab Sample ID: 240-82983-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	410	B	330	180	ug/L	333.33		8260B	Total/NA
Tetrachloroethene	8600		330	100	ug/L	333.33		8260B	Total/NA
Trichloroethene	210	J	330	110	ug/L	333.33		8260B	Total/NA
cis-1,2-Dichloroethene	230	J	330	100	ug/L	333.33		8260B	Total/NA

Client Sample ID: W-170727-RA-42

Lab Sample ID: 240-82983-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	400	B	330	180	ug/L	333.33		8260B	Total/NA
Tetrachloroethene	9400		330	100	ug/L	333.33		8260B	Total/NA
Trichloroethene	210	J	330	110	ug/L	333.33		8260B	Total/NA
cis-1,2-Dichloroethene	210	J	330	100	ug/L	333.33		8260B	Total/NA

Client Sample ID: W-170727-RA-34

Lab Sample ID: 240-82983-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.2	J	6.3	1.8	ug/L	6.25		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-34 (Continued)

Lab Sample ID: 240-82983-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	6.3	B	6.3	3.3	ug/L	6.25		8260B	Total/NA
Vinyl chloride	23		6.3	2.8	ug/L	6.25		8260B	Total/NA
cis-1,2-Dichloroethene	180		6.3	1.9	ug/L	6.25		8260B	Total/NA
trans-1,2-Dichloroethene	110		6.3	1.8	ug/L	6.25		8260B	Total/NA

Client Sample ID: W-170727-RA-35

Lab Sample ID: 240-82983-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	15		6.3	1.8	ug/L	6.25		8260B	Total/NA
Methylene Chloride	6.6	B	6.3	3.3	ug/L	6.25		8260B	Total/NA
Vinyl chloride	35		6.3	2.8	ug/L	6.25		8260B	Total/NA
cis-1,2-Dichloroethene	150		6.3	1.9	ug/L	6.25		8260B	Total/NA
trans-1,2-Dichloroethene	46		6.3	1.8	ug/L	6.25		8260B	Total/NA

Client Sample ID: W-170727-RA-36

Lab Sample ID: 240-82983-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.1	J	10	1.8	ug/L	1		8260B	Total/NA
Benzene	1.5		1.0	0.28	ug/L	1		8260B	Total/NA
Toluene	0.36	J	1.0	0.23	ug/L	1		8260B	Total/NA
Vinyl chloride	1.6		1.0	0.45	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	5.7		1.0	0.30	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	8.3		1.0	0.29	ug/L	1		8260B	Total/NA

Client Sample ID: W-170727-RA-37

Lab Sample ID: 240-82983-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	45		2.5	0.70	ug/L	2.5		8260B	Total/NA
Ethylbenzene	11		2.5	0.65	ug/L	2.5		8260B	Total/NA
Toluene	0.86	J	2.5	0.58	ug/L	2.5		8260B	Total/NA
Vinyl chloride	2.9		2.5	1.1	ug/L	2.5		8260B	Total/NA
Xylenes, Total	17		5.0	0.60	ug/L	2.5		8260B	Total/NA
trans-1,2-Dichloroethene	11		2.5	0.73	ug/L	2.5		8260B	Total/NA
Isopropylbenzene	2.7		2.5	0.53	ug/L	2.5		8260B	Total/NA
Naphthalene	70		2.5	0.63	ug/L	2.5		8260B	Total/NA

Client Sample ID: W-170726-RA-32

Lab Sample ID: 240-82983-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.7	J	10	1.8	ug/L	1		8260B	Total/NA
Tetrachloroethene	3.8		1.0	0.30	ug/L	1		8260B	Total/NA
Trichloroethene	8.4		1.0	0.33	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	2.5		1.0	0.30	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	3.1		1.0	0.29	ug/L	1		8260B	Total/NA

Client Sample ID: S-170726-RA-12

Lab Sample ID: 240-82983-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	180	J B	310	80	ug/Kg	1	☼	8260B	Total/NA
Tetrachloroethene	920		310	26	ug/Kg	1	☼	8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: S-170726-RA-12 (Continued)

Lab Sample ID: 240-82983-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl acetate	3600		1500	92	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	97	J	310	25	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82983-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.79	J	1.0	0.25	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170726-RA-29

Lab Sample ID: 240-82983-1

Date Collected: 07/26/17 12:00

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	67	U	67	12	ug/L			08/07/17 19:07	6.67
Benzene	9.0		6.7	1.9	ug/L			08/07/17 19:07	6.67
Dichlorobromomethane	6.7	U	6.7	2.0	ug/L			08/07/17 19:07	6.67
Bromoform	6.7	U	6.7	2.9	ug/L			08/07/17 19:07	6.67
Bromomethane	6.7	U	6.7	2.8	ug/L			08/07/17 19:07	6.67
2-Butanone (MEK)	67	U	67	6.8	ug/L			08/07/17 19:07	6.67
Carbon disulfide	6.7	U	6.7	2.3	ug/L			08/07/17 19:07	6.67
Carbon tetrachloride	6.7	U	6.7	2.3	ug/L			08/07/17 19:07	6.67
Chlorobenzene	6.7	U	6.7	2.1	ug/L			08/07/17 19:07	6.67
Chloroethane	6.7	U	6.7	2.7	ug/L			08/07/17 19:07	6.67
Chloroform	6.7	U	6.7	2.1	ug/L			08/07/17 19:07	6.67
Chloromethane	6.7	U	6.7	2.9	ug/L			08/07/17 19:07	6.67
1,1-Dichloroethane	6.7	U	6.7	1.7	ug/L			08/07/17 19:07	6.67
1,2-Dichloroethane	6.7	U	6.7	2.0	ug/L			08/07/17 19:07	6.67
1,1-Dichloroethene	1.9	J	6.7	1.8	ug/L			08/07/17 19:07	6.67
1,2-Dichloropropane	6.7	U	6.7	2.0	ug/L			08/07/17 19:07	6.67
cis-1,3-Dichloropropene	6.7	U	6.7	1.7	ug/L			08/07/17 19:07	6.67
trans-1,3-Dichloropropene	6.7	U	6.7	2.1	ug/L			08/07/17 19:07	6.67
Ethylbenzene	6.7	U	6.7	1.7	ug/L			08/07/17 19:07	6.67
2-Hexanone	67	U	67	8.2	ug/L			08/07/17 19:07	6.67
Methylene Chloride	6.7	U	6.7	3.5	ug/L			08/07/17 19:07	6.67
4-Methyl-2-pentanone (MIBK)	67	U	67	4.7	ug/L			08/07/17 19:07	6.67
Styrene	6.7	U	6.7	1.5	ug/L			08/07/17 19:07	6.67
1,1,2,2-Tetrachloroethane	6.7	U	6.7	2.1	ug/L			08/07/17 19:07	6.67
Tetrachloroethene	6.7	U	6.7	2.0	ug/L			08/07/17 19:07	6.67
Toluene	6.7	U	6.7	1.5	ug/L			08/07/17 19:07	6.67
Trichloroethene	6.7	U	6.7	2.2	ug/L			08/07/17 19:07	6.67
Vinyl chloride	46		6.7	3.0	ug/L			08/07/17 19:07	6.67
Xylenes, Total	13	U	13	1.6	ug/L			08/07/17 19:07	6.67
1,1,1-Trichloroethane	6.7	U	6.7	1.5	ug/L			08/07/17 19:07	6.67
1,1,2-Trichloroethane	6.7	U	6.7	2.3	ug/L			08/07/17 19:07	6.67
Cyclohexane	6.7	U	6.7	2.9	ug/L			08/07/17 19:07	6.67
1,2-Dibromo-3-Chloropropane	13	U	13	3.1	ug/L			08/07/17 19:07	6.67
Ethylene Dibromide	6.7	U	6.7	1.5	ug/L			08/07/17 19:07	6.67
Dichlorodifluoromethane	6.7	U	6.7	3.3	ug/L			08/07/17 19:07	6.67
cis-1,2-Dichloroethene	140		6.7	2.0	ug/L			08/07/17 19:07	6.67
trans-1,2-Dichloroethene	26		6.7	1.9	ug/L			08/07/17 19:07	6.67
Isopropylbenzene	6.7	U	6.7	1.4	ug/L			08/07/17 19:07	6.67
Methyl acetate	67	U	67	9.5	ug/L			08/07/17 19:07	6.67
Methyl tert-butyl ether	6.7	U	6.7	1.8	ug/L			08/07/17 19:07	6.67
1,1,2-Trichloro-1,2,2-trifluoroethane	6.7	U	6.7	2.7	ug/L			08/07/17 19:07	6.67
1,2,4-Trichlorobenzene	6.7	U	6.7	1.8	ug/L			08/07/17 19:07	6.67
1,2-Dichlorobenzene	6.7	U	6.7	1.7	ug/L			08/07/17 19:07	6.67
1,3-Dichlorobenzene	6.7	U	6.7	2.1	ug/L			08/07/17 19:07	6.67
1,4-Dichlorobenzene	6.7	U	6.7	1.5	ug/L			08/07/17 19:07	6.67
Trichlorofluoromethane	6.7	U	6.7	3.3	ug/L			08/07/17 19:07	6.67
Chlorodibromomethane	6.7	U	6.7	1.7	ug/L			08/07/17 19:07	6.67
Methylcyclohexane	6.7	U	6.7	3.0	ug/L			08/07/17 19:07	6.67
Naphthalene	6.7	U	6.7	1.7	ug/L			08/07/17 19:07	6.67

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170726-RA-29

Lab Sample ID: 240-82983-1

Date Collected: 07/26/17 12:00

Matrix: Water

Date Received: 07/28/17 09:30

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	87		61 - 138		08/07/17 19:07	6.67
4-Bromofluorobenzene (Surr)	86		69 - 120		08/07/17 19:07	6.67
Toluene-d8 (Surr)	91		73 - 120		08/07/17 19:07	6.67
Dibromofluoromethane (Surr)	87		69 - 124		08/07/17 19:07	6.67

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170726-RA-30

Lab Sample ID: 240-82983-2

Date Collected: 07/26/17 12:30

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	140	U	140	25	ug/L			08/07/17 19:30	14.29
Benzene	33		14	4.0	ug/L			08/07/17 19:30	14.29
Dichlorobromomethane	14	U	14	4.3	ug/L			08/07/17 19:30	14.29
Bromoform	14	U	14	6.1	ug/L			08/07/17 19:30	14.29
Bromomethane	14	U	14	6.0	ug/L			08/07/17 19:30	14.29
2-Butanone (MEK)	140	U	140	15	ug/L			08/07/17 19:30	14.29
Carbon disulfide	14	U	14	4.9	ug/L			08/07/17 19:30	14.29
Carbon tetrachloride	14	U	14	5.0	ug/L			08/07/17 19:30	14.29
Chlorobenzene	14	U	14	4.6	ug/L			08/07/17 19:30	14.29
Chloroethane	14	U	14	5.9	ug/L			08/07/17 19:30	14.29
Chloroform	14	U	14	4.4	ug/L			08/07/17 19:30	14.29
Chloromethane	14	U	14	6.1	ug/L			08/07/17 19:30	14.29
1,1-Dichloroethane	14	U	14	3.6	ug/L			08/07/17 19:30	14.29
1,2-Dichloroethane	14	U	14	4.3	ug/L			08/07/17 19:30	14.29
1,1-Dichloroethene	14	U	14	3.9	ug/L			08/07/17 19:30	14.29
1,2-Dichloropropane	14	U	14	4.3	ug/L			08/07/17 19:30	14.29
cis-1,3-Dichloropropene	14	U	14	3.7	ug/L			08/07/17 19:30	14.29
trans-1,3-Dichloropropene	14	U	14	4.4	ug/L			08/07/17 19:30	14.29
Ethylbenzene	5.5	J	14	3.7	ug/L			08/07/17 19:30	14.29
2-Hexanone	140	U	140	18	ug/L			08/07/17 19:30	14.29
Methylene Chloride	14	U	14	7.6	ug/L			08/07/17 19:30	14.29
4-Methyl-2-pentanone (MIBK)	140	U	140	10	ug/L			08/07/17 19:30	14.29
Styrene	14	U	14	3.3	ug/L			08/07/17 19:30	14.29
1,1,2,2-Tetrachloroethane	14	U	14	4.6	ug/L			08/07/17 19:30	14.29
Tetrachloroethene	14	U	14	4.3	ug/L			08/07/17 19:30	14.29
Toluene	14	U	14	3.3	ug/L			08/07/17 19:30	14.29
Trichloroethene	14	U	14	4.7	ug/L			08/07/17 19:30	14.29
Vinyl chloride	130		14	6.4	ug/L			08/07/17 19:30	14.29
Xylenes, Total	29	U	29	3.4	ug/L			08/07/17 19:30	14.29
1,1,1-Trichloroethane	14	U	14	3.3	ug/L			08/07/17 19:30	14.29
1,1,2-Trichloroethane	14	U	14	4.9	ug/L			08/07/17 19:30	14.29
Cyclohexane	14	U	14	6.3	ug/L			08/07/17 19:30	14.29
1,2-Dibromo-3-Chloropropane	29	U	29	6.7	ug/L			08/07/17 19:30	14.29
Ethylene Dibromide	14	U	14	3.3	ug/L			08/07/17 19:30	14.29
Dichlorodifluoromethane	14	U	14	7.1	ug/L			08/07/17 19:30	14.29
cis-1,2-Dichloroethene	350		14	4.3	ug/L			08/07/17 19:30	14.29
trans-1,2-Dichloroethene	33		14	4.1	ug/L			08/07/17 19:30	14.29
Isopropylbenzene	14	U	14	3.0	ug/L			08/07/17 19:30	14.29
Methyl acetate	140	U	140	20	ug/L			08/07/17 19:30	14.29
Methyl tert-butyl ether	14	U	14	3.9	ug/L			08/07/17 19:30	14.29
1,1,2-Trichloro-1,2,2-trifluoroethane	14	U	14	5.9	ug/L			08/07/17 19:30	14.29
1,2,4-Trichlorobenzene	14	U	14	3.9	ug/L			08/07/17 19:30	14.29
1,2-Dichlorobenzene	14	U	14	3.7	ug/L			08/07/17 19:30	14.29
1,3-Dichlorobenzene	14	U	14	4.6	ug/L			08/07/17 19:30	14.29
1,4-Dichlorobenzene	14	U	14	3.3	ug/L			08/07/17 19:30	14.29
Trichlorofluoromethane	14	U	14	7.1	ug/L			08/07/17 19:30	14.29
Chlorodibromomethane	14	U	14	3.6	ug/L			08/07/17 19:30	14.29
Methylcyclohexane	14	U	14	6.4	ug/L			08/07/17 19:30	14.29
Naphthalene	14	U	14	3.6	ug/L			08/07/17 19:30	14.29

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170726-RA-30

Date Collected: 07/26/17 12:30

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-2

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	86		61 - 138		08/07/17 19:30	14.29
4-Bromofluorobenzene (Surr)	86		69 - 120		08/07/17 19:30	14.29
Toluene-d8 (Surr)	89		73 - 120		08/07/17 19:30	14.29
Dibromofluoromethane (Surr)	86		69 - 124		08/07/17 19:30	14.29

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170726-RA-31

Lab Sample ID: 240-82983-3

Date Collected: 07/26/17 13:50

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5000	U	5000	880	ug/L			08/07/17 19:52	500
Benzene	500	U	500	140	ug/L			08/07/17 19:52	500
Dichlorobromomethane	500	U	500	150	ug/L			08/07/17 19:52	500
Bromoform	500	U	500	220	ug/L			08/07/17 19:52	500
Bromomethane	500	U	500	210	ug/L			08/07/17 19:52	500
2-Butanone (MEK)	5000	U	5000	510	ug/L			08/07/17 19:52	500
Carbon disulfide	500	U	500	170	ug/L			08/07/17 19:52	500
Carbon tetrachloride	500	U	500	180	ug/L			08/07/17 19:52	500
Chlorobenzene	500	U	500	160	ug/L			08/07/17 19:52	500
Chloroethane	500	U	500	210	ug/L			08/07/17 19:52	500
Chloroform	500	U	500	160	ug/L			08/07/17 19:52	500
Chloromethane	500	U	500	220	ug/L			08/07/17 19:52	500
1,1-Dichloroethane	500	U	500	130	ug/L			08/07/17 19:52	500
1,2-Dichloroethane	500	U	500	150	ug/L			08/07/17 19:52	500
1,1-Dichloroethene	500	U	500	140	ug/L			08/07/17 19:52	500
1,2-Dichloropropane	500	U	500	150	ug/L			08/07/17 19:52	500
cis-1,3-Dichloropropene	500	U	500	130	ug/L			08/07/17 19:52	500
trans-1,3-Dichloropropene	500	U	500	160	ug/L			08/07/17 19:52	500
Ethylbenzene	500	U	500	130	ug/L			08/07/17 19:52	500
2-Hexanone	5000	U	5000	620	ug/L			08/07/17 19:52	500
Methylene Chloride	500	U	500	270	ug/L			08/07/17 19:52	500
4-Methyl-2-pentanone (MIBK)	5000	U	5000	360	ug/L			08/07/17 19:52	500
Styrene	500	U	500	120	ug/L			08/07/17 19:52	500
1,1,2,2-Tetrachloroethane	500	U	500	160	ug/L			08/07/17 19:52	500
Tetrachloroethene	500	U	500	150	ug/L			08/07/17 19:52	500
Toluene	500	U	500	120	ug/L			08/07/17 19:52	500
Trichloroethene	500	U	500	170	ug/L			08/07/17 19:52	500
Vinyl chloride	500	U	500	230	ug/L			08/07/17 19:52	500
Xylenes, Total	1000	U	1000	120	ug/L			08/07/17 19:52	500
1,1,1-Trichloroethane	500	U	500	120	ug/L			08/07/17 19:52	500
1,1,2-Trichloroethane	500	U	500	170	ug/L			08/07/17 19:52	500
Cyclohexane	500	U	500	220	ug/L			08/07/17 19:52	500
1,2-Dibromo-3-Chloropropane	1000	U	1000	240	ug/L			08/07/17 19:52	500
Ethylene Dibromide	500	U	500	120	ug/L			08/07/17 19:52	500
Dichlorodifluoromethane	500	U	500	250	ug/L			08/07/17 19:52	500
cis-1,2-Dichloroethene	8900		500	150	ug/L			08/07/17 19:52	500
trans-1,2-Dichloroethene	270	J	500	150	ug/L			08/07/17 19:52	500
Isopropylbenzene	500	U	500	110	ug/L			08/07/17 19:52	500
Methyl acetate	5000	U	5000	720	ug/L			08/07/17 19:52	500
Methyl tert-butyl ether	500	U	500	140	ug/L			08/07/17 19:52	500
1,1,2-Trichloro-1,2,2-trifluoroethane	500	U	500	210	ug/L			08/07/17 19:52	500
1,2,4-Trichlorobenzene	500	U	500	140	ug/L			08/07/17 19:52	500
1,2-Dichlorobenzene	500	U	500	130	ug/L			08/07/17 19:52	500
1,3-Dichlorobenzene	500	U	500	160	ug/L			08/07/17 19:52	500
1,4-Dichlorobenzene	500	U	500	120	ug/L			08/07/17 19:52	500
Trichlorofluoromethane	500	U	500	250	ug/L			08/07/17 19:52	500
Chlorodibromomethane	500	U	500	130	ug/L			08/07/17 19:52	500
Methylcyclohexane	500	U	500	230	ug/L			08/07/17 19:52	500
Naphthalene	500	U	500	130	ug/L			08/07/17 19:52	500

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170726-RA-31

Lab Sample ID: 240-82983-3

Date Collected: 07/26/17 13:50

Matrix: Water

Date Received: 07/28/17 09:30

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	89		61 - 138		08/07/17 19:52	500
4-Bromofluorobenzene (Surr)	85		69 - 120		08/07/17 19:52	500
Toluene-d8 (Surr)	90		73 - 120		08/07/17 19:52	500
Dibromofluoromethane (Surr)	87		69 - 124		08/07/17 19:52	500

- 1
- 2
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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-39

Lab Sample ID: 240-82983-4

Date Collected: 07/27/17 09:20

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2500	U	2500	440	ug/L			08/08/17 16:24	250
Benzene	250	U	250	70	ug/L			08/08/17 16:24	250
Dichlorobromomethane	250	U	250	75	ug/L			08/08/17 16:24	250
Bromoform	250	U	250	110	ug/L			08/08/17 16:24	250
Bromomethane	250	U	250	110	ug/L			08/08/17 16:24	250
2-Butanone (MEK)	2500	U	2500	260	ug/L			08/08/17 16:24	250
Carbon disulfide	250	U	250	85	ug/L			08/08/17 16:24	250
Carbon tetrachloride	250	U	250	88	ug/L			08/08/17 16:24	250
Chlorobenzene	250	U	250	80	ug/L			08/08/17 16:24	250
Chloroethane	250	U	250	100	ug/L			08/08/17 16:24	250
Chloroform	250	U	250	78	ug/L			08/08/17 16:24	250
Chloromethane	250	U	250	110	ug/L			08/08/17 16:24	250
1,1-Dichloroethane	250	U	250	63	ug/L			08/08/17 16:24	250
1,2-Dichloroethane	250	U	250	75	ug/L			08/08/17 16:24	250
1,1-Dichloroethene	250	U	250	68	ug/L			08/08/17 16:24	250
1,2-Dichloropropane	250	U	250	75	ug/L			08/08/17 16:24	250
cis-1,3-Dichloropropene	250	U	250	65	ug/L			08/08/17 16:24	250
trans-1,3-Dichloropropene	250	U	250	78	ug/L			08/08/17 16:24	250
Ethylbenzene	250	U	250	65	ug/L			08/08/17 16:24	250
2-Hexanone	2500	U	2500	310	ug/L			08/08/17 16:24	250
Methylene Chloride	290	B	250	130	ug/L			08/08/17 16:24	250
4-Methyl-2-pentanone (MIBK)	2500	U	2500	180	ug/L			08/08/17 16:24	250
Styrene	250	U	250	58	ug/L			08/08/17 16:24	250
1,1,2,2-Tetrachloroethane	250	U	250	80	ug/L			08/08/17 16:24	250
Tetrachloroethene	7200		250	75	ug/L			08/08/17 16:24	250
Toluene	250	U	250	58	ug/L			08/08/17 16:24	250
Trichloroethene	250	U	250	83	ug/L			08/08/17 16:24	250
Vinyl chloride	250	U	250	110	ug/L			08/08/17 16:24	250
Xylenes, Total	500	U	500	60	ug/L			08/08/17 16:24	250
1,1,1-Trichloroethane	250	U	250	58	ug/L			08/08/17 16:24	250
1,1,2-Trichloroethane	250	U	250	85	ug/L			08/08/17 16:24	250
Cyclohexane	250	U	250	110	ug/L			08/08/17 16:24	250
1,2-Dibromo-3-Chloropropane	500	U	500	120	ug/L			08/08/17 16:24	250
Ethylene Dibromide	250	U	250	58	ug/L			08/08/17 16:24	250
Dichlorodifluoromethane	250	U	250	130	ug/L			08/08/17 16:24	250
cis-1,2-Dichloroethene	250	U	250	75	ug/L			08/08/17 16:24	250
trans-1,2-Dichloroethene	250	U	250	73	ug/L			08/08/17 16:24	250
Isopropylbenzene	250	U	250	53	ug/L			08/08/17 16:24	250
Methyl acetate	2500	U	2500	360	ug/L			08/08/17 16:24	250
Methyl tert-butyl ether	250	U	250	68	ug/L			08/08/17 16:24	250
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	100	ug/L			08/08/17 16:24	250
1,2,4-Trichlorobenzene	250	U	250	68	ug/L			08/08/17 16:24	250
1,2-Dichlorobenzene	250	U	250	65	ug/L			08/08/17 16:24	250
1,3-Dichlorobenzene	250	U	250	80	ug/L			08/08/17 16:24	250
1,4-Dichlorobenzene	250	U	250	58	ug/L			08/08/17 16:24	250
Trichlorofluoromethane	250	U	250	130	ug/L			08/08/17 16:24	250
Chlorodibromomethane	250	U	250	63	ug/L			08/08/17 16:24	250
Methylcyclohexane	250	U	250	110	ug/L			08/08/17 16:24	250
Naphthalene	250	U	250	63	ug/L			08/08/17 16:24	250

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-39

Date Collected: 07/27/17 09:20

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-4

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	81		61 - 138		08/08/17 16:24	250
4-Bromofluorobenzene (Surr)	89		69 - 120		08/08/17 16:24	250
Toluene-d8 (Surr)	96		73 - 120		08/08/17 16:24	250
Dibromofluoromethane (Surr)	96		69 - 124		08/08/17 16:24	250

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-40

Lab Sample ID: 240-82983-5

Date Collected: 07/27/17 09:20

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/08/17 16:46	1
Benzene	1.0	U	1.0	0.28	ug/L			08/08/17 16:46	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/08/17 16:46	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/08/17 16:46	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/08/17 16:46	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/08/17 16:46	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/08/17 16:46	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/08/17 16:46	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/08/17 16:46	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/08/17 16:46	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/08/17 16:46	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/08/17 16:46	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/08/17 16:46	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/08/17 16:46	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/08/17 16:46	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/08/17 16:46	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/08/17 16:46	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/08/17 16:46	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/08/17 16:46	1
2-Hexanone	10	U	10	1.2	ug/L			08/08/17 16:46	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/08/17 16:46	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/08/17 16:46	1
Styrene	1.0	U	1.0	0.23	ug/L			08/08/17 16:46	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/08/17 16:46	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/08/17 16:46	1
Toluene	1.0	U	1.0	0.23	ug/L			08/08/17 16:46	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/08/17 16:46	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/08/17 16:46	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/08/17 16:46	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/08/17 16:46	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/08/17 16:46	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/08/17 16:46	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/08/17 16:46	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/08/17 16:46	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/08/17 16:46	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/08/17 16:46	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/08/17 16:46	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/08/17 16:46	1
Methyl acetate	10	U	10	1.4	ug/L			08/08/17 16:46	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/08/17 16:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/08/17 16:46	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/08/17 16:46	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/08/17 16:46	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/08/17 16:46	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/08/17 16:46	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/08/17 16:46	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/08/17 16:46	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/08/17 16:46	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/08/17 16:46	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-40

Date Collected: 07/27/17 09:20

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-5

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	82		61 - 138		08/08/17 16:46	1
4-Bromofluorobenzene (Surr)	88		69 - 120		08/08/17 16:46	1
Toluene-d8 (Surr)	95		73 - 120		08/08/17 16:46	1
Dibromofluoromethane (Surr)	96		69 - 124		08/08/17 16:46	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-41

Lab Sample ID: 240-82983-6

Date Collected: 07/27/17 10:15

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3300	U	3300	590	ug/L			08/08/17 17:09	333.33
Benzene	330	U	330	93	ug/L			08/08/17 17:09	333.33
Dichlorobromomethane	330	U	330	100	ug/L			08/08/17 17:09	333.33
Bromoform	330	U	330	140	ug/L			08/08/17 17:09	333.33
Bromomethane	330	U	330	140	ug/L			08/08/17 17:09	333.33
2-Butanone (MEK)	3300	U	3300	340	ug/L			08/08/17 17:09	333.33
Carbon disulfide	330	U	330	110	ug/L			08/08/17 17:09	333.33
Carbon tetrachloride	330	U	330	120	ug/L			08/08/17 17:09	333.33
Chlorobenzene	330	U	330	110	ug/L			08/08/17 17:09	333.33
Chloroethane	330	U	330	140	ug/L			08/08/17 17:09	333.33
Chloroform	330	U	330	100	ug/L			08/08/17 17:09	333.33
Chloromethane	330	U	330	140	ug/L			08/08/17 17:09	333.33
1,1-Dichloroethane	330	U	330	83	ug/L			08/08/17 17:09	333.33
1,2-Dichloroethane	330	U	330	100	ug/L			08/08/17 17:09	333.33
1,1-Dichloroethene	330	U	330	90	ug/L			08/08/17 17:09	333.33
1,2-Dichloropropane	330	U	330	100	ug/L			08/08/17 17:09	333.33
cis-1,3-Dichloropropene	330	U	330	87	ug/L			08/08/17 17:09	333.33
trans-1,3-Dichloropropene	330	U	330	100	ug/L			08/08/17 17:09	333.33
Ethylbenzene	330	U	330	87	ug/L			08/08/17 17:09	333.33
2-Hexanone	3300	U	3300	410	ug/L			08/08/17 17:09	333.33
Methylene Chloride	410	B	330	180	ug/L			08/08/17 17:09	333.33
4-Methyl-2-pentanone (MIBK)	3300	U	3300	240	ug/L			08/08/17 17:09	333.33
Styrene	330	U	330	77	ug/L			08/08/17 17:09	333.33
1,1,2,2-Tetrachloroethane	330	U	330	110	ug/L			08/08/17 17:09	333.33
Tetrachloroethene	8600		330	100	ug/L			08/08/17 17:09	333.33
Toluene	330	U	330	77	ug/L			08/08/17 17:09	333.33
Trichloroethene	210	J	330	110	ug/L			08/08/17 17:09	333.33
Vinyl chloride	330	U	330	150	ug/L			08/08/17 17:09	333.33
Xylenes, Total	670	U	670	80	ug/L			08/08/17 17:09	333.33
1,1,1-Trichloroethane	330	U	330	77	ug/L			08/08/17 17:09	333.33
1,1,2-Trichloroethane	330	U	330	110	ug/L			08/08/17 17:09	333.33
Cyclohexane	330	U	330	150	ug/L			08/08/17 17:09	333.33
1,2-Dibromo-3-Chloropropane	670	U	670	160	ug/L			08/08/17 17:09	333.33
Ethylene Dibromide	330	U	330	77	ug/L			08/08/17 17:09	333.33
Dichlorodifluoromethane	330	U	330	170	ug/L			08/08/17 17:09	333.33
cis-1,2-Dichloroethene	230	J	330	100	ug/L			08/08/17 17:09	333.33
trans-1,2-Dichloroethene	330	U	330	97	ug/L			08/08/17 17:09	333.33
Isopropylbenzene	330	U	330	70	ug/L			08/08/17 17:09	333.33
Methyl acetate	3300	U	3300	480	ug/L			08/08/17 17:09	333.33
Methyl tert-butyl ether	330	U	330	90	ug/L			08/08/17 17:09	333.33
1,1,2-Trichloro-1,2,2-trifluoroethane	330	U	330	140	ug/L			08/08/17 17:09	333.33
1,2,4-Trichlorobenzene	330	U	330	90	ug/L			08/08/17 17:09	333.33
1,2-Dichlorobenzene	330	U	330	87	ug/L			08/08/17 17:09	333.33
1,3-Dichlorobenzene	330	U	330	110	ug/L			08/08/17 17:09	333.33
1,4-Dichlorobenzene	330	U	330	77	ug/L			08/08/17 17:09	333.33
Trichlorofluoromethane	330	U	330	170	ug/L			08/08/17 17:09	333.33
Chlorodibromomethane	330	U	330	83	ug/L			08/08/17 17:09	333.33
Methylcyclohexane	330	U	330	150	ug/L			08/08/17 17:09	333.33
Naphthalene	330	U	330	83	ug/L			08/08/17 17:09	333.33

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-41

Date Collected: 07/27/17 10:15

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-6

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	81		61 - 138		08/08/17 17:09	333.33
4-Bromofluorobenzene (Surr)	90		69 - 120		08/08/17 17:09	333.33
Toluene-d8 (Surr)	96		73 - 120		08/08/17 17:09	333.33
Dibromofluoromethane (Surr)	97		69 - 124		08/08/17 17:09	333.33

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-42

Lab Sample ID: 240-82983-7

Date Collected: 07/27/17 10:15

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3300	U	3300	590	ug/L			08/08/17 17:30	333.33
Benzene	330	U	330	93	ug/L			08/08/17 17:30	333.33
Dichlorobromomethane	330	U	330	100	ug/L			08/08/17 17:30	333.33
Bromoform	330	U	330	140	ug/L			08/08/17 17:30	333.33
Bromomethane	330	U	330	140	ug/L			08/08/17 17:30	333.33
2-Butanone (MEK)	3300	U	3300	340	ug/L			08/08/17 17:30	333.33
Carbon disulfide	330	U	330	110	ug/L			08/08/17 17:30	333.33
Carbon tetrachloride	330	U	330	120	ug/L			08/08/17 17:30	333.33
Chlorobenzene	330	U	330	110	ug/L			08/08/17 17:30	333.33
Chloroethane	330	U	330	140	ug/L			08/08/17 17:30	333.33
Chloroform	330	U	330	100	ug/L			08/08/17 17:30	333.33
Chloromethane	330	U	330	140	ug/L			08/08/17 17:30	333.33
1,1-Dichloroethane	330	U	330	83	ug/L			08/08/17 17:30	333.33
1,2-Dichloroethane	330	U	330	100	ug/L			08/08/17 17:30	333.33
1,1-Dichloroethene	330	U	330	90	ug/L			08/08/17 17:30	333.33
1,2-Dichloropropane	330	U	330	100	ug/L			08/08/17 17:30	333.33
cis-1,3-Dichloropropene	330	U	330	87	ug/L			08/08/17 17:30	333.33
trans-1,3-Dichloropropene	330	U	330	100	ug/L			08/08/17 17:30	333.33
Ethylbenzene	330	U	330	87	ug/L			08/08/17 17:30	333.33
2-Hexanone	3300	U	3300	410	ug/L			08/08/17 17:30	333.33
Methylene Chloride	400	B	330	180	ug/L			08/08/17 17:30	333.33
4-Methyl-2-pentanone (MIBK)	3300	U	3300	240	ug/L			08/08/17 17:30	333.33
Styrene	330	U	330	77	ug/L			08/08/17 17:30	333.33
1,1,2,2-Tetrachloroethane	330	U	330	110	ug/L			08/08/17 17:30	333.33
Tetrachloroethene	9400		330	100	ug/L			08/08/17 17:30	333.33
Toluene	330	U	330	77	ug/L			08/08/17 17:30	333.33
Trichloroethene	210	J	330	110	ug/L			08/08/17 17:30	333.33
Vinyl chloride	330	U	330	150	ug/L			08/08/17 17:30	333.33
Xylenes, Total	670	U	670	80	ug/L			08/08/17 17:30	333.33
1,1,1-Trichloroethane	330	U	330	77	ug/L			08/08/17 17:30	333.33
1,1,2-Trichloroethane	330	U	330	110	ug/L			08/08/17 17:30	333.33
Cyclohexane	330	U	330	150	ug/L			08/08/17 17:30	333.33
1,2-Dibromo-3-Chloropropane	670	U	670	160	ug/L			08/08/17 17:30	333.33
Ethylene Dibromide	330	U	330	77	ug/L			08/08/17 17:30	333.33
Dichlorodifluoromethane	330	U	330	170	ug/L			08/08/17 17:30	333.33
cis-1,2-Dichloroethene	210	J	330	100	ug/L			08/08/17 17:30	333.33
trans-1,2-Dichloroethene	330	U	330	97	ug/L			08/08/17 17:30	333.33
Isopropylbenzene	330	U	330	70	ug/L			08/08/17 17:30	333.33
Methyl acetate	3300	U	3300	480	ug/L			08/08/17 17:30	333.33
Methyl tert-butyl ether	330	U	330	90	ug/L			08/08/17 17:30	333.33
1,1,2-Trichloro-1,2,2-trifluoroethane	330	U	330	140	ug/L			08/08/17 17:30	333.33
1,2,4-Trichlorobenzene	330	U	330	90	ug/L			08/08/17 17:30	333.33
1,2-Dichlorobenzene	330	U	330	87	ug/L			08/08/17 17:30	333.33
1,3-Dichlorobenzene	330	U	330	110	ug/L			08/08/17 17:30	333.33
1,4-Dichlorobenzene	330	U	330	77	ug/L			08/08/17 17:30	333.33
Trichlorofluoromethane	330	U	330	170	ug/L			08/08/17 17:30	333.33
Chlorodibromomethane	330	U	330	83	ug/L			08/08/17 17:30	333.33
Methylcyclohexane	330	U	330	150	ug/L			08/08/17 17:30	333.33
Naphthalene	330	U	330	83	ug/L			08/08/17 17:30	333.33

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-42

Date Collected: 07/27/17 10:15

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-7

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	82		61 - 138		08/08/17 17:30	333.33
4-Bromofluorobenzene (Surr)	89		69 - 120		08/08/17 17:30	333.33
Toluene-d8 (Surr)	96		73 - 120		08/08/17 17:30	333.33
Dibromofluoromethane (Surr)	99		69 - 124		08/08/17 17:30	333.33

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-34

Lab Sample ID: 240-82983-8

Date Collected: 07/27/17 09:10

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	63	U	63	11	ug/L			08/08/17 17:53	6.25
Benzene	6.2	J	6.3	1.8	ug/L			08/08/17 17:53	6.25
Dichlorobromomethane	6.3	U	6.3	1.9	ug/L			08/08/17 17:53	6.25
Bromoform	6.3	U	6.3	2.7	ug/L			08/08/17 17:53	6.25
Bromomethane	6.3	U	6.3	2.6	ug/L			08/08/17 17:53	6.25
2-Butanone (MEK)	63	U	63	6.4	ug/L			08/08/17 17:53	6.25
Carbon disulfide	6.3	U	6.3	2.1	ug/L			08/08/17 17:53	6.25
Carbon tetrachloride	6.3	U	6.3	2.2	ug/L			08/08/17 17:53	6.25
Chlorobenzene	6.3	U	6.3	2.0	ug/L			08/08/17 17:53	6.25
Chloroethane	6.3	U	6.3	2.6	ug/L			08/08/17 17:53	6.25
Chloroform	6.3	U	6.3	1.9	ug/L			08/08/17 17:53	6.25
Chloromethane	6.3	U	6.3	2.7	ug/L			08/08/17 17:53	6.25
1,1-Dichloroethane	6.3	U	6.3	1.6	ug/L			08/08/17 17:53	6.25
1,2-Dichloroethane	6.3	U	6.3	1.9	ug/L			08/08/17 17:53	6.25
1,1-Dichloroethene	6.3	U	6.3	1.7	ug/L			08/08/17 17:53	6.25
1,2-Dichloropropane	6.3	U	6.3	1.9	ug/L			08/08/17 17:53	6.25
cis-1,3-Dichloropropene	6.3	U	6.3	1.6	ug/L			08/08/17 17:53	6.25
trans-1,3-Dichloropropene	6.3	U	6.3	1.9	ug/L			08/08/17 17:53	6.25
Ethylbenzene	6.3	U	6.3	1.6	ug/L			08/08/17 17:53	6.25
2-Hexanone	63	U	63	7.7	ug/L			08/08/17 17:53	6.25
Methylene Chloride	6.3	B	6.3	3.3	ug/L			08/08/17 17:53	6.25
4-Methyl-2-pentanone (MIBK)	63	U	63	4.4	ug/L			08/08/17 17:53	6.25
Styrene	6.3	U	6.3	1.4	ug/L			08/08/17 17:53	6.25
1,1,2,2-Tetrachloroethane	6.3	U	6.3	2.0	ug/L			08/08/17 17:53	6.25
Tetrachloroethene	6.3	U	6.3	1.9	ug/L			08/08/17 17:53	6.25
Toluene	6.3	U	6.3	1.4	ug/L			08/08/17 17:53	6.25
Trichloroethene	6.3	U	6.3	2.1	ug/L			08/08/17 17:53	6.25
Vinyl chloride	23		6.3	2.8	ug/L			08/08/17 17:53	6.25
Xylenes, Total	13	U	13	1.5	ug/L			08/08/17 17:53	6.25
1,1,1-Trichloroethane	6.3	U	6.3	1.4	ug/L			08/08/17 17:53	6.25
1,1,2-Trichloroethane	6.3	U	6.3	2.1	ug/L			08/08/17 17:53	6.25
Cyclohexane	6.3	U	6.3	2.8	ug/L			08/08/17 17:53	6.25
1,2-Dibromo-3-Chloropropane	13	U	13	2.9	ug/L			08/08/17 17:53	6.25
Ethylene Dibromide	6.3	U	6.3	1.4	ug/L			08/08/17 17:53	6.25
Dichlorodifluoromethane	6.3	U	6.3	3.1	ug/L			08/08/17 17:53	6.25
cis-1,2-Dichloroethene	180		6.3	1.9	ug/L			08/08/17 17:53	6.25
trans-1,2-Dichloroethene	110		6.3	1.8	ug/L			08/08/17 17:53	6.25
Isopropylbenzene	6.3	U	6.3	1.3	ug/L			08/08/17 17:53	6.25
Methyl acetate	63	U	63	8.9	ug/L			08/08/17 17:53	6.25
Methyl tert-butyl ether	6.3	U	6.3	1.7	ug/L			08/08/17 17:53	6.25
1,1,2-Trichloro-1,2,2-trifluoroethane	6.3	U	6.3	2.6	ug/L			08/08/17 17:53	6.25
1,2,4-Trichlorobenzene	6.3	U	6.3	1.7	ug/L			08/08/17 17:53	6.25
1,2-Dichlorobenzene	6.3	U	6.3	1.6	ug/L			08/08/17 17:53	6.25
1,3-Dichlorobenzene	6.3	U	6.3	2.0	ug/L			08/08/17 17:53	6.25
1,4-Dichlorobenzene	6.3	U	6.3	1.4	ug/L			08/08/17 17:53	6.25
Trichlorofluoromethane	6.3	U	6.3	3.1	ug/L			08/08/17 17:53	6.25
Chlorodibromomethane	6.3	U	6.3	1.6	ug/L			08/08/17 17:53	6.25
Methylcyclohexane	6.3	U	6.3	2.8	ug/L			08/08/17 17:53	6.25
Naphthalene	6.3	U	6.3	1.6	ug/L			08/08/17 17:53	6.25

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-34

Date Collected: 07/27/17 09:10

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-8

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	84		61 - 138		08/08/17 17:53	6.25
4-Bromofluorobenzene (Surr)	89		69 - 120		08/08/17 17:53	6.25
Toluene-d8 (Surr)	95		73 - 120		08/08/17 17:53	6.25
Dibromofluoromethane (Surr)	100		69 - 124		08/08/17 17:53	6.25

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-35

Lab Sample ID: 240-82983-9

Date Collected: 07/27/17 10:00

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	63	U	63	11	ug/L			08/08/17 18:16	6.25
Benzene	15		6.3	1.8	ug/L			08/08/17 18:16	6.25
Dichlorobromomethane	6.3	U	6.3	1.9	ug/L			08/08/17 18:16	6.25
Bromoform	6.3	U	6.3	2.7	ug/L			08/08/17 18:16	6.25
Bromomethane	6.3	U	6.3	2.6	ug/L			08/08/17 18:16	6.25
2-Butanone (MEK)	63	U	63	6.4	ug/L			08/08/17 18:16	6.25
Carbon disulfide	6.3	U	6.3	2.1	ug/L			08/08/17 18:16	6.25
Carbon tetrachloride	6.3	U	6.3	2.2	ug/L			08/08/17 18:16	6.25
Chlorobenzene	6.3	U	6.3	2.0	ug/L			08/08/17 18:16	6.25
Chloroethane	6.3	U	6.3	2.6	ug/L			08/08/17 18:16	6.25
Chloroform	6.3	U	6.3	1.9	ug/L			08/08/17 18:16	6.25
Chloromethane	6.3	U	6.3	2.7	ug/L			08/08/17 18:16	6.25
1,1-Dichloroethane	6.3	U	6.3	1.6	ug/L			08/08/17 18:16	6.25
1,2-Dichloroethane	6.3	U	6.3	1.9	ug/L			08/08/17 18:16	6.25
1,1-Dichloroethene	6.3	U	6.3	1.7	ug/L			08/08/17 18:16	6.25
1,2-Dichloropropane	6.3	U	6.3	1.9	ug/L			08/08/17 18:16	6.25
cis-1,3-Dichloropropene	6.3	U	6.3	1.6	ug/L			08/08/17 18:16	6.25
trans-1,3-Dichloropropene	6.3	U	6.3	1.9	ug/L			08/08/17 18:16	6.25
Ethylbenzene	6.3	U	6.3	1.6	ug/L			08/08/17 18:16	6.25
2-Hexanone	63	U	63	7.7	ug/L			08/08/17 18:16	6.25
Methylene Chloride	6.6 B		6.3	3.3	ug/L			08/08/17 18:16	6.25
4-Methyl-2-pentanone (MIBK)	63	U	63	4.4	ug/L			08/08/17 18:16	6.25
Styrene	6.3	U	6.3	1.4	ug/L			08/08/17 18:16	6.25
1,1,2,2-Tetrachloroethane	6.3	U	6.3	2.0	ug/L			08/08/17 18:16	6.25
Tetrachloroethene	6.3	U	6.3	1.9	ug/L			08/08/17 18:16	6.25
Toluene	6.3	U	6.3	1.4	ug/L			08/08/17 18:16	6.25
Trichloroethene	6.3	U	6.3	2.1	ug/L			08/08/17 18:16	6.25
Vinyl chloride	35		6.3	2.8	ug/L			08/08/17 18:16	6.25
Xylenes, Total	13	U	13	1.5	ug/L			08/08/17 18:16	6.25
1,1,1-Trichloroethane	6.3	U	6.3	1.4	ug/L			08/08/17 18:16	6.25
1,1,2-Trichloroethane	6.3	U	6.3	2.1	ug/L			08/08/17 18:16	6.25
Cyclohexane	6.3	U	6.3	2.8	ug/L			08/08/17 18:16	6.25
1,2-Dibromo-3-Chloropropane	13	U	13	2.9	ug/L			08/08/17 18:16	6.25
Ethylene Dibromide	6.3	U	6.3	1.4	ug/L			08/08/17 18:16	6.25
Dichlorodifluoromethane	6.3	U	6.3	3.1	ug/L			08/08/17 18:16	6.25
cis-1,2-Dichloroethene	150		6.3	1.9	ug/L			08/08/17 18:16	6.25
trans-1,2-Dichloroethene	46		6.3	1.8	ug/L			08/08/17 18:16	6.25
Isopropylbenzene	6.3	U	6.3	1.3	ug/L			08/08/17 18:16	6.25
Methyl acetate	63	U	63	8.9	ug/L			08/08/17 18:16	6.25
Methyl tert-butyl ether	6.3	U	6.3	1.7	ug/L			08/08/17 18:16	6.25
1,1,2-Trichloro-1,2,2-trifluoroethane	6.3	U	6.3	2.6	ug/L			08/08/17 18:16	6.25
1,2,4-Trichlorobenzene	6.3	U	6.3	1.7	ug/L			08/08/17 18:16	6.25
1,2-Dichlorobenzene	6.3	U	6.3	1.6	ug/L			08/08/17 18:16	6.25
1,3-Dichlorobenzene	6.3	U	6.3	2.0	ug/L			08/08/17 18:16	6.25
1,4-Dichlorobenzene	6.3	U	6.3	1.4	ug/L			08/08/17 18:16	6.25
Trichlorofluoromethane	6.3	U	6.3	3.1	ug/L			08/08/17 18:16	6.25
Chlorodibromomethane	6.3	U	6.3	1.6	ug/L			08/08/17 18:16	6.25
Methylcyclohexane	6.3	U	6.3	2.8	ug/L			08/08/17 18:16	6.25
Naphthalene	6.3	U	6.3	1.6	ug/L			08/08/17 18:16	6.25

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-35

Date Collected: 07/27/17 10:00

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-9

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	81		61 - 138		08/08/17 18:16	6.25
4-Bromofluorobenzene (Surr)	88		69 - 120		08/08/17 18:16	6.25
Toluene-d8 (Surr)	96		73 - 120		08/08/17 18:16	6.25
Dibromofluoromethane (Surr)	98		69 - 124		08/08/17 18:16	6.25

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-36

Lab Sample ID: 240-82983-10

Date Collected: 07/27/17 10:55

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2.1	J	10	1.8	ug/L			08/08/17 17:00	1
Benzene	1.5		1.0	0.28	ug/L			08/08/17 17:00	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/08/17 17:00	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/08/17 17:00	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/08/17 17:00	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/08/17 17:00	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/08/17 17:00	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/08/17 17:00	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/08/17 17:00	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/08/17 17:00	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/08/17 17:00	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/08/17 17:00	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/08/17 17:00	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/08/17 17:00	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/08/17 17:00	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/08/17 17:00	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/08/17 17:00	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/08/17 17:00	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/08/17 17:00	1
2-Hexanone	10	U	10	1.2	ug/L			08/08/17 17:00	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/08/17 17:00	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/08/17 17:00	1
Styrene	1.0	U	1.0	0.23	ug/L			08/08/17 17:00	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/08/17 17:00	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/08/17 17:00	1
Toluene	0.36	J	1.0	0.23	ug/L			08/08/17 17:00	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/08/17 17:00	1
Vinyl chloride	1.6		1.0	0.45	ug/L			08/08/17 17:00	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/08/17 17:00	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/08/17 17:00	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/08/17 17:00	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/08/17 17:00	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/08/17 17:00	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/08/17 17:00	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/08/17 17:00	1
cis-1,2-Dichloroethene	5.7		1.0	0.30	ug/L			08/08/17 17:00	1
trans-1,2-Dichloroethene	8.3		1.0	0.29	ug/L			08/08/17 17:00	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/08/17 17:00	1
Methyl acetate	10	U	10	1.4	ug/L			08/08/17 17:00	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/08/17 17:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/08/17 17:00	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/08/17 17:00	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/08/17 17:00	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/08/17 17:00	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/08/17 17:00	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/08/17 17:00	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/08/17 17:00	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/08/17 17:00	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/08/17 17:00	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-36

Lab Sample ID: 240-82983-10

Date Collected: 07/27/17 10:55

Matrix: Water

Date Received: 07/28/17 09:30

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	87		61 - 138		08/08/17 17:00	1
4-Bromofluorobenzene (Surr)	85		69 - 120		08/08/17 17:00	1
Toluene-d8 (Surr)	90		73 - 120		08/08/17 17:00	1
Dibromofluoromethane (Surr)	86		69 - 124		08/08/17 17:00	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-37

Lab Sample ID: 240-82983-11

Date Collected: 07/27/17 13:20

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	4.4	ug/L			08/09/17 13:28	2.5
Benzene	45		2.5	0.70	ug/L			08/09/17 13:28	2.5
Dichlorobromomethane	2.5	U	2.5	0.75	ug/L			08/09/17 13:28	2.5
Bromoform	2.5	U	2.5	1.1	ug/L			08/09/17 13:28	2.5
Bromomethane	2.5	U	2.5	1.1	ug/L			08/09/17 13:28	2.5
2-Butanone (MEK)	25	U	25	2.6	ug/L			08/09/17 13:28	2.5
Carbon disulfide	2.5	U	2.5	0.85	ug/L			08/09/17 13:28	2.5
Carbon tetrachloride	2.5	U	2.5	0.88	ug/L			08/09/17 13:28	2.5
Chlorobenzene	2.5	U	2.5	0.80	ug/L			08/09/17 13:28	2.5
Chloroethane	2.5	U	2.5	1.0	ug/L			08/09/17 13:28	2.5
Chloroform	2.5	U	2.5	0.78	ug/L			08/09/17 13:28	2.5
Chloromethane	2.5	U	2.5	1.1	ug/L			08/09/17 13:28	2.5
1,1-Dichloroethane	2.5	U	2.5	0.63	ug/L			08/09/17 13:28	2.5
1,2-Dichloroethane	2.5	U	2.5	0.75	ug/L			08/09/17 13:28	2.5
1,1-Dichloroethene	2.5	U	2.5	0.68	ug/L			08/09/17 13:28	2.5
1,2-Dichloropropane	2.5	U	2.5	0.75	ug/L			08/09/17 13:28	2.5
cis-1,3-Dichloropropene	2.5	U	2.5	0.65	ug/L			08/09/17 13:28	2.5
trans-1,3-Dichloropropene	2.5	U	2.5	0.78	ug/L			08/09/17 13:28	2.5
Ethylbenzene	11		2.5	0.65	ug/L			08/09/17 13:28	2.5
2-Hexanone	25	U	25	3.1	ug/L			08/09/17 13:28	2.5
Methylene Chloride	2.5	U	2.5	1.3	ug/L			08/09/17 13:28	2.5
4-Methyl-2-pentanone (MIBK)	25	U	25	1.8	ug/L			08/09/17 13:28	2.5
Styrene	2.5	U	2.5	0.58	ug/L			08/09/17 13:28	2.5
1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.80	ug/L			08/09/17 13:28	2.5
Tetrachloroethene	2.5	U	2.5	0.75	ug/L			08/09/17 13:28	2.5
Toluene	0.86	J	2.5	0.58	ug/L			08/09/17 13:28	2.5
Trichloroethene	2.5	U	2.5	0.83	ug/L			08/09/17 13:28	2.5
Vinyl chloride	2.9		2.5	1.1	ug/L			08/09/17 13:28	2.5
Xylenes, Total	17		5.0	0.60	ug/L			08/09/17 13:28	2.5
1,1,1-Trichloroethane	2.5	U	2.5	0.58	ug/L			08/09/17 13:28	2.5
1,1,2-Trichloroethane	2.5	U	2.5	0.85	ug/L			08/09/17 13:28	2.5
Cyclohexane	2.5	U	2.5	1.1	ug/L			08/09/17 13:28	2.5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.2	ug/L			08/09/17 13:28	2.5
Ethylene Dibromide	2.5	U	2.5	0.58	ug/L			08/09/17 13:28	2.5
Dichlorodifluoromethane	2.5	U	2.5	1.3	ug/L			08/09/17 13:28	2.5
cis-1,2-Dichloroethene	2.5	U	2.5	0.75	ug/L			08/09/17 13:28	2.5
trans-1,2-Dichloroethene	11		2.5	0.73	ug/L			08/09/17 13:28	2.5
Isopropylbenzene	2.7		2.5	0.53	ug/L			08/09/17 13:28	2.5
Methyl acetate	25	U	25	3.6	ug/L			08/09/17 13:28	2.5
Methyl tert-butyl ether	2.5	U	2.5	0.68	ug/L			08/09/17 13:28	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U	2.5	1.0	ug/L			08/09/17 13:28	2.5
1,2,4-Trichlorobenzene	2.5	U	2.5	0.68	ug/L			08/09/17 13:28	2.5
1,2-Dichlorobenzene	2.5	U	2.5	0.65	ug/L			08/09/17 13:28	2.5
1,3-Dichlorobenzene	2.5	U	2.5	0.80	ug/L			08/09/17 13:28	2.5
1,4-Dichlorobenzene	2.5	U	2.5	0.58	ug/L			08/09/17 13:28	2.5
Trichlorofluoromethane	2.5	U	2.5	1.3	ug/L			08/09/17 13:28	2.5
Chlorodibromomethane	2.5	U	2.5	0.63	ug/L			08/09/17 13:28	2.5
Methylcyclohexane	2.5	U	2.5	1.1	ug/L			08/09/17 13:28	2.5
Naphthalene	70		2.5	0.63	ug/L			08/09/17 13:28	2.5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-37

Lab Sample ID: 240-82983-11

Date Collected: 07/27/17 13:20

Matrix: Water

Date Received: 07/28/17 09:30

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	86		61 - 138		08/09/17 13:28	2.5
4-Bromofluorobenzene (Surr)	91		69 - 120		08/09/17 13:28	2.5
Toluene-d8 (Surr)	91		73 - 120		08/09/17 13:28	2.5
Dibromofluoromethane (Surr)	85		69 - 124		08/09/17 13:28	2.5

- 1
- 2
- 3
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- 11
- 12
- 13
- 14

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170726-RA-32

Lab Sample ID: 240-82983-12

Date Collected: 07/26/17 14:10

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.7	J	10	1.8	ug/L			08/09/17 13:06	1
Benzene	1.0	U	1.0	0.28	ug/L			08/09/17 13:06	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/09/17 13:06	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/09/17 13:06	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/09/17 13:06	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/09/17 13:06	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/09/17 13:06	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/09/17 13:06	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/09/17 13:06	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/09/17 13:06	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/09/17 13:06	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/09/17 13:06	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/09/17 13:06	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/09/17 13:06	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/09/17 13:06	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/09/17 13:06	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/09/17 13:06	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/09/17 13:06	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/09/17 13:06	1
2-Hexanone	10	U	10	1.2	ug/L			08/09/17 13:06	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/09/17 13:06	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/09/17 13:06	1
Styrene	1.0	U	1.0	0.23	ug/L			08/09/17 13:06	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/09/17 13:06	1
Tetrachloroethene	3.8		1.0	0.30	ug/L			08/09/17 13:06	1
Toluene	1.0	U	1.0	0.23	ug/L			08/09/17 13:06	1
Trichloroethene	8.4		1.0	0.33	ug/L			08/09/17 13:06	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/09/17 13:06	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/09/17 13:06	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/09/17 13:06	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/09/17 13:06	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/09/17 13:06	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/09/17 13:06	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/09/17 13:06	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/09/17 13:06	1
cis-1,2-Dichloroethene	2.5		1.0	0.30	ug/L			08/09/17 13:06	1
trans-1,2-Dichloroethene	3.1		1.0	0.29	ug/L			08/09/17 13:06	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/09/17 13:06	1
Methyl acetate	10	U	10	1.4	ug/L			08/09/17 13:06	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/09/17 13:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/09/17 13:06	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/09/17 13:06	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/09/17 13:06	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/09/17 13:06	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/09/17 13:06	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/09/17 13:06	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/09/17 13:06	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/09/17 13:06	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/09/17 13:06	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170726-RA-32

Lab Sample ID: 240-82983-12

Date Collected: 07/26/17 14:10

Matrix: Water

Date Received: 07/28/17 09:30

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	86		61 - 138		08/09/17 13:06	1
4-Bromofluorobenzene (Surr)	87		69 - 120		08/09/17 13:06	1
Toluene-d8 (Surr)	90		73 - 120		08/09/17 13:06	1
Dibromofluoromethane (Surr)	88		69 - 124		08/09/17 13:06	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: S-170726-RA-12

Lab Sample ID: 240-82983-13

Date Collected: 07/26/17 14:00

Matrix: Solid

Date Received: 07/28/17 09:30

Percent Solids: 98.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1200	U	1200	120	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Benzene	310	U	310	30	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Dichlorobromomethane	310	U	310	22	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Bromoform	310	U	310	28	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Bromomethane	310	U	310	34	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
2-Butanone (MEK)	1200	U	1200	61	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Carbon disulfide	310	U	310	22	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Carbon tetrachloride	310	U	310	33	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Chlorobenzene	310	U	310	37	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Chloroethane	310	U	310	34	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Chloroform	310	U	310	30	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Chloromethane	310	U	310	22	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,1-Dichloroethane	310	U	310	38	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,2-Dichloroethane	310	U	310	37	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,1-Dichloroethene	310	U	310	44	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,2-Dichloropropane	310	U	310	37	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
cis-1,3-Dichloropropene	310	U	310	28	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
trans-1,3-Dichloropropene	310	U	310	18	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Ethylbenzene	310	U	310	43	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
2-Hexanone	1200	U	1200	110	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Methylene Chloride	180	J B	310	80	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
4-Methyl-2-pentanone (MIBK)	1200	U	1200	49	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Styrene	310	U	310	12	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,1,2,2-Tetrachloroethane	310	U	310	30	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Tetrachloroethene	920		310	26	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Toluene	310	U	310	30	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Trichloroethene	310	U	310	45	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Vinyl chloride	310	U	310	21	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Xylenes, Total	610	U	610	34	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,1,1-Trichloroethane	310	U	310	34	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,1,2-Trichloroethane	310	U	310	28	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Cyclohexane	610	U	610	37	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,2-Dibromo-3-Chloropropane	610	U	610	59	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Ethylene Dibromide	310	U	310	28	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Dichlorodifluoromethane	310	U	310	27	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
cis-1,2-Dichloroethene	310	U	310	43	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
trans-1,2-Dichloroethene	310	U	310	43	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Isopropylbenzene	310	U	310	42	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Methyl acetate	3600		1500	92	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Methyl tert-butyl ether	310	U	310	32	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	310	U	310	28	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,2,4-Trichlorobenzene	310	U	310	32	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,2-Dichlorobenzene	310	U	310	22	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,3-Dichlorobenzene	310	U	310	47	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
1,4-Dichlorobenzene	310	U	310	33	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Trichlorofluoromethane	310	U	310	42	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Chlorodibromomethane	310	U	310	42	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Methylcyclohexane	610	U	610	45	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1
Naphthalene	97	J	310	25	ug/Kg	☼	07/31/17 10:46	08/01/17 15:37	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: S-170726-RA-12

Lab Sample ID: 240-82983-13

Date Collected: 07/26/17 14:00

Matrix: Solid

Date Received: 07/28/17 09:30

Percent Solids: 98.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	131		64 - 144	07/31/17 10:46	08/01/17 15:37	1
4-Bromofluorobenzene (Surr)	144	X	58 - 142	07/31/17 10:46	08/01/17 15:37	1
Toluene-d8 (Surr)	117		61 - 137	07/31/17 10:46	08/01/17 15:37	1
Dibromofluoromethane (Surr)	116		31 - 155	07/31/17 10:46	08/01/17 15:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	98.1		0.1	0.1	%			07/28/17 15:42	1
Percent Moisture	1.9		0.1	0.1	%			07/28/17 15:42	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82983-14

Date Collected: 07/26/17 00:00

Matrix: Water

Date Received: 07/28/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/08/17 18:07	1
Benzene	1.0	U	1.0	0.28	ug/L			08/08/17 18:07	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/08/17 18:07	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/08/17 18:07	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/08/17 18:07	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/08/17 18:07	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/08/17 18:07	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/08/17 18:07	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/08/17 18:07	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/08/17 18:07	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/08/17 18:07	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/08/17 18:07	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/08/17 18:07	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/08/17 18:07	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/08/17 18:07	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/08/17 18:07	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/08/17 18:07	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/08/17 18:07	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/08/17 18:07	1
2-Hexanone	10	U	10	1.2	ug/L			08/08/17 18:07	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/08/17 18:07	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/08/17 18:07	1
Styrene	1.0	U	1.0	0.23	ug/L			08/08/17 18:07	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/08/17 18:07	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/08/17 18:07	1
Toluene	1.0	U	1.0	0.23	ug/L			08/08/17 18:07	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/08/17 18:07	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/08/17 18:07	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/08/17 18:07	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/08/17 18:07	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/08/17 18:07	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/08/17 18:07	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/08/17 18:07	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/08/17 18:07	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/08/17 18:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/08/17 18:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/08/17 18:07	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/08/17 18:07	1
Methyl acetate	10	U	10	1.4	ug/L			08/08/17 18:07	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/08/17 18:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/08/17 18:07	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/08/17 18:07	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/08/17 18:07	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/08/17 18:07	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/08/17 18:07	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/08/17 18:07	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/08/17 18:07	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/08/17 18:07	1
Naphthalene	0.79	J	1.0	0.25	ug/L			08/08/17 18:07	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82983-14

Date Collected: 07/26/17 00:00

Matrix: Water

Date Received: 07/28/17 09:30

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	87		61 - 138		08/08/17 18:07	1
4-Bromofluorobenzene (Surr)	85		69 - 120		08/08/17 18:07	1
Toluene-d8 (Surr)	89		73 - 120		08/08/17 18:07	1
Dibromofluoromethane (Surr)	88		69 - 124		08/08/17 18:07	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	TOL	DBFM
		(64-144)	(58-142)	(61-137)	(31-155)
240-82983-13	S-170726-RA-12	131	144 X	117	116
LCS 240-289326/2-A	Lab Control Sample	98	114	89	95
MB 240-289326/1-A	Method Blank	100	105	82	86

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE	BFB	TOL	DBFM
		(61-138)	(69-120)	(73-120)	(69-124)
240-82983-1	W-170726-RA-29	87	86	91	87
240-82983-2	W-170726-RA-30	86	86	89	86
240-82983-3	W-170726-RA-31	89	85	90	87
240-82983-4	W-170727-RA-39	81	89	96	96
240-82983-5	W-170727-RA-40	82	88	95	96
240-82983-6	W-170727-RA-41	81	90	96	97
240-82983-7	W-170727-RA-42	82	89	96	99
240-82983-8	W-170727-RA-34	84	89	95	100
240-82983-9	W-170727-RA-35	81	88	96	98
240-82983-10	W-170727-RA-36	87	85	90	86
240-82983-11	W-170727-RA-37	86	91	91	85
240-82983-12	W-170726-RA-32	86	87	90	88
240-82983-14	TRIP BLANK	87	85	89	88
LCS 240-290151/4	Lab Control Sample	82	93	94	85
LCS 240-290307/4	Lab Control Sample	79	92	97	99
LCS 240-290318/4	Lab Control Sample	77	91	93	78
LCS 240-290477/4	Lab Control Sample	82	93	94	86
MB 240-290151/6	Method Blank	86	86	90	85
MB 240-290307/7	Method Blank	82	91	94	97
MB 240-290318/32	Method Blank	88	86	91	87
MB 240-290477/7	Method Blank	85	88	90	86

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-289326/1-A

Matrix: Solid

Analysis Batch: 289366

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 289326

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1000	U	1000	97	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Benzene	250	U	250	24	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Dichlorobromomethane	250	U	250	18	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Bromoform	250	U	250	23	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Bromomethane	250	U	250	28	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
2-Butanone (MEK)	1000	U	1000	50	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Carbon disulfide	250	U	250	18	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Carbon tetrachloride	250	U	250	27	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Chlorobenzene	250	U	250	30	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Chloroethane	250	U	250	28	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Chloroform	250	U	250	24	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Chloromethane	250	U	250	18	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,1-Dichloroethane	250	U	250	31	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,2-Dichloroethane	250	U	250	30	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,1-Dichloroethene	250	U	250	36	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,2-Dichloropropane	250	U	250	30	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
cis-1,3-Dichloropropene	250	U	250	23	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
trans-1,3-Dichloropropene	250	U	250	15	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Ethylbenzene	250	U	250	35	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
2-Hexanone	1000	U	1000	86	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Methylene Chloride	169	J	250	65	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
4-Methyl-2-pentanone (MIBK)	1000	U	1000	40	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Styrene	250	U	250	10	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,1,2,2-Tetrachloroethane	250	U	250	24	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Tetrachloroethene	250	U	250	21	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Toluene	250	U	250	24	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Trichloroethene	250	U	250	37	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Vinyl chloride	250	U	250	17	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Xylenes, Total	500	U	500	28	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,1,1-Trichloroethane	250	U	250	28	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,1,2-Trichloroethane	250	U	250	23	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Cyclohexane	500	U	500	30	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,2-Dibromo-3-Chloropropane	500	U	500	48	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Ethylene Dibromide	250	U	250	23	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Dichlorodifluoromethane	250	U	250	22	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
cis-1,2-Dichloroethene	250	U	250	35	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
trans-1,2-Dichloroethene	250	U	250	35	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Isopropylbenzene	250	U	250	34	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Methyl acetate	1300	U	1300	75	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Methyl tert-butyl ether	250	U	250	26	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	23	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,2,4-Trichlorobenzene	250	U	250	26	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,2-Dichlorobenzene	250	U	250	18	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,3-Dichlorobenzene	250	U	250	38	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
1,4-Dichlorobenzene	250	U	250	27	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Trichlorofluoromethane	250	U	250	34	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Chlorodibromomethane	250	U	250	34	ug/Kg		07/31/17 10:46	07/31/17 16:21	1
Methylcyclohexane	500	U	500	37	ug/Kg		07/31/17 10:46	07/31/17 16:21	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-289326/1-A
Matrix: Solid
Analysis Batch: 289366

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 289326

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	250	U	250	20	ug/Kg		07/31/17 10:46	07/31/17 16:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		64 - 144	07/31/17 10:46	07/31/17 16:21	1
4-Bromofluorobenzene (Surr)	105		58 - 142	07/31/17 10:46	07/31/17 16:21	1
Toluene-d8 (Surr)	82		61 - 137	07/31/17 10:46	07/31/17 16:21	1
Dibromofluoromethane (Surr)	86		31 - 155	07/31/17 10:46	07/31/17 16:21	1

Lab Sample ID: LCS 240-289326/2-A
Matrix: Solid
Analysis Batch: 289366

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 289326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acetone	2000	1270		ug/Kg		64	24 - 125
Benzene	1000	1060		ug/Kg		106	77 - 120
Dichlorobromomethane	1000	969		ug/Kg		97	61 - 132
Bromoform	1000	773		ug/Kg		77	40 - 140
Bromomethane	1000	379		ug/Kg		38	10 - 153
2-Butanone (MEK)	2000	1550		ug/Kg		78	51 - 120
Carbon disulfide	1000	792		ug/Kg		79	17 - 163
Carbon tetrachloride	1000	1010		ug/Kg		101	43 - 144
Chlorobenzene	1000	1010		ug/Kg		101	76 - 120
Chloroethane	1000	238	J	ug/Kg		24	10 - 166
Chloroform	1000	1000		ug/Kg		100	74 - 120
Chloromethane	1000	846		ug/Kg		85	41 - 124
1,1-Dichloroethane	1000	1080		ug/Kg		108	72 - 120
1,2-Dichloroethane	1000	969		ug/Kg		97	71 - 120
1,1-Dichloroethene	1000	776		ug/Kg		78	58 - 130
1,2-Dichloropropane	1000	1150		ug/Kg		115	78 - 122
cis-1,3-Dichloropropene	1000	1070		ug/Kg		107	66 - 126
trans-1,3-Dichloropropene	1000	887		ug/Kg		89	55 - 121
Ethylbenzene	1000	1030		ug/Kg		103	76 - 120
2-Hexanone	2000	1740		ug/Kg		87	52 - 129
Methylene Chloride	1000	1180		ug/Kg		118	64 - 126
4-Methyl-2-pentanone (MIBK)	2000	1640		ug/Kg		82	65 - 131
Styrene	1000	951		ug/Kg		95	80 - 120
1,1,2,2-Tetrachloroethane	1000	1200		ug/Kg		120	78 - 120
Tetrachloroethene	1000	1000		ug/Kg		100	68 - 122
Toluene	1000	986		ug/Kg		99	74 - 120
Trichloroethene	1000	866		ug/Kg		87	73 - 123
Vinyl chloride	1000	836		ug/Kg		84	49 - 131
Xylenes, Total	2000	2120		ug/Kg		106	78 - 120
1,1,1-Trichloroethane	1000	1060		ug/Kg		106	60 - 136
1,1,2-Trichloroethane	1000	963		ug/Kg		96	80 - 120
Cyclohexane	1000	1250		ug/Kg		125	66 - 129
1,2-Dibromo-3-Chloropropane	1000	897		ug/Kg		90	40 - 133
Ethylene Dibromide	1000	932		ug/Kg		93	80 - 120
Dichlorodifluoromethane	1000	734		ug/Kg		73	15 - 127

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-289326/2-A
Matrix: Solid
Analysis Batch: 289366

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 289326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	1000	1010		ug/Kg		101	78 - 120
trans-1,2-Dichloroethene	1000	1070		ug/Kg		107	74 - 124
Isopropylbenzene	1000	1110		ug/Kg		111	76 - 124
Methyl acetate	2000	1790		ug/Kg		89	63 - 126
Methyl tert-butyl ether	1000	1050		ug/Kg		105	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	806		ug/Kg		81	64 - 125
1,2,4-Trichlorobenzene	1000	942		ug/Kg		94	60 - 124
1,2-Dichlorobenzene	1000	1010		ug/Kg		101	75 - 120
1,3-Dichlorobenzene	1000	1040		ug/Kg		104	72 - 120
1,4-Dichlorobenzene	1000	1000		ug/Kg		100	71 - 120
Trichlorofluoromethane	1000	727		ug/Kg		73	28 - 152
Chlorodibromomethane	1000	800		ug/Kg		80	46 - 125
Methylcyclohexane	1000	1200		ug/Kg		120	71 - 126
m-Xylene & p-Xylene	1000	1070		ug/Kg		107	78 - 120
o-Xylene	1000	1050		ug/Kg		105	77 - 120
Naphthalene	1000	814		ug/Kg		81	68 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		64 - 144
4-Bromofluorobenzene (Surr)	114		58 - 142
Toluene-d8 (Surr)	89		61 - 137
Dibromofluoromethane (Surr)	95		31 - 155

Lab Sample ID: MB 240-290151/6
Matrix: Water
Analysis Batch: 290151

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/07/17 12:25	1
Benzene	1.0	U	1.0	0.28	ug/L			08/07/17 12:25	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/07/17 12:25	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/07/17 12:25	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/07/17 12:25	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/07/17 12:25	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/07/17 12:25	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/07/17 12:25	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/07/17 12:25	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/07/17 12:25	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/07/17 12:25	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/07/17 12:25	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/07/17 12:25	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/07/17 12:25	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/07/17 12:25	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/07/17 12:25	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/07/17 12:25	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/07/17 12:25	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/07/17 12:25	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-290151/6
Matrix: Water
Analysis Batch: 290151

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Hexanone	10	U	10	1.2	ug/L			08/07/17 12:25	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/07/17 12:25	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/07/17 12:25	1
Styrene	1.0	U	1.0	0.23	ug/L			08/07/17 12:25	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/07/17 12:25	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/07/17 12:25	1
Toluene	1.0	U	1.0	0.23	ug/L			08/07/17 12:25	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/07/17 12:25	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/07/17 12:25	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/07/17 12:25	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/07/17 12:25	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/07/17 12:25	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/07/17 12:25	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/07/17 12:25	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/07/17 12:25	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/07/17 12:25	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/07/17 12:25	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/07/17 12:25	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/07/17 12:25	1
Methyl acetate	10	U	10	1.4	ug/L			08/07/17 12:25	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/07/17 12:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/07/17 12:25	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/07/17 12:25	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/07/17 12:25	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/07/17 12:25	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/07/17 12:25	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/07/17 12:25	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/07/17 12:25	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/07/17 12:25	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/07/17 12:25	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	86		61 - 138		08/07/17 12:25	1
4-Bromofluorobenzene (Surr)	86		69 - 120		08/07/17 12:25	1
Toluene-d8 (Surr)	90		73 - 120		08/07/17 12:25	1
Dibromofluoromethane (Surr)	85		69 - 124		08/07/17 12:25	1

Lab Sample ID: LCS 240-290151/4
Matrix: Water
Analysis Batch: 290151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Acetone	20.0	11.3		ug/L		56	35 - 131
Benzene	10.0	8.99		ug/L		90	79 - 120
Dichlorobromomethane	10.0	8.20		ug/L		82	79 - 125
Bromoform	10.0	6.09		ug/L		61	55 - 145
Bromomethane	10.0	11.6		ug/L		116	17 - 158
2-Butanone (MEK)	20.0	15.6		ug/L		78	43 - 149

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290151/4

Matrix: Water

Analysis Batch: 290151

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	10.0	9.35		ug/L		94	49 - 141
Carbon tetrachloride	10.0	6.81		ug/L		68	55 - 171
Chlorobenzene	10.0	9.92		ug/L		99	80 - 120
Chloroethane	10.0	11.1		ug/L		111	10 - 149
Chloroform	10.0	8.99		ug/L		90	80 - 120
Chloromethane	10.0	9.31		ug/L		93	59 - 124
1,1-Dichloroethane	10.0	9.06		ug/L		91	74 - 120
1,2-Dichloroethane	10.0	8.92		ug/L		89	68 - 133
1,1-Dichloroethene	10.0	10.1		ug/L		101	65 - 127
1,2-Dichloropropane	10.0	9.58		ug/L		96	78 - 127
cis-1,3-Dichloropropene	10.0	8.35		ug/L		84	75 - 120
trans-1,3-Dichloropropene	10.0	7.72		ug/L		77	67 - 120
Ethylbenzene	10.0	9.65		ug/L		96	80 - 120
2-Hexanone	20.0	16.0		ug/L		80	28 - 169
Methylene Chloride	10.0	8.84		ug/L		88	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	15.2		ug/L		76	53 - 144
Styrene	10.0	9.57		ug/L		96	80 - 121
1,1,2,2-Tetrachloroethane	10.0	9.69		ug/L		97	58 - 122
Tetrachloroethene	10.0	9.97		ug/L		100	80 - 122
Toluene	10.0	9.86		ug/L		99	78 - 120
Trichloroethene	10.0	9.26		ug/L		93	76 - 124
Vinyl chloride	10.0	9.63		ug/L		96	65 - 124
Xylenes, Total	20.0	19.0		ug/L		95	80 - 120
1,1,1-Trichloroethane	10.0	8.16		ug/L		82	64 - 147
1,1,2-Trichloroethane	10.0	10.3		ug/L		103	76 - 121
Cyclohexane	10.0	8.89		ug/L		89	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	5.59		ug/L		56	50 - 130
Ethylene Dibromide	10.0	9.25		ug/L		92	80 - 120
Dichlorodifluoromethane	10.0	7.04		ug/L		70	42 - 141
cis-1,2-Dichloroethene	10.0	9.05		ug/L		90	77 - 120
trans-1,2-Dichloroethene	10.0	9.41		ug/L		94	74 - 124
Isopropylbenzene	10.0	9.32		ug/L		93	80 - 128
Methyl acetate	20.0	15.6		ug/L		78	63 - 137
Methyl tert-butyl ether	10.0	8.05		ug/L		81	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.0		ug/L		110	65 - 144
1,2,4-Trichlorobenzene	10.0	7.50		ug/L		75	34 - 141
1,2-Dichlorobenzene	10.0	9.74		ug/L		97	80 - 120
1,3-Dichlorobenzene	10.0	9.96		ug/L		100	80 - 120
1,4-Dichlorobenzene	10.0	9.66		ug/L		97	80 - 120
Trichlorofluoromethane	10.0	11.7		ug/L		117	27 - 176
Chlorodibromomethane	10.0	7.91		ug/L		79	64 - 129
Methylcyclohexane	10.0	8.48		ug/L		85	63 - 141
m-Xylene & p-Xylene	10.0	9.44		ug/L		94	80 - 120
o-Xylene	10.0	9.58		ug/L		96	80 - 120
Naphthalene	10.0	6.05		ug/L		60	31 - 127

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290151/4
Matrix: Water
Analysis Batch: 290151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	82		61 - 138
4-Bromofluorobenzene (Surr)	93		69 - 120
Toluene-d8 (Surr)	94		73 - 120
Dibromofluoromethane (Surr)	85		69 - 124

Lab Sample ID: MB 240-290307/7
Matrix: Water
Analysis Batch: 290307

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/08/17 11:08	1
Benzene	1.0	U	1.0	0.28	ug/L			08/08/17 11:08	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/08/17 11:08	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/08/17 11:08	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/08/17 11:08	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/08/17 11:08	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/08/17 11:08	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/08/17 11:08	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/08/17 11:08	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/08/17 11:08	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/08/17 11:08	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/08/17 11:08	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/08/17 11:08	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/08/17 11:08	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/08/17 11:08	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/08/17 11:08	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/08/17 11:08	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/08/17 11:08	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/08/17 11:08	1
2-Hexanone	10	U	10	1.2	ug/L			08/08/17 11:08	1
Methylene Chloride	1.03		1.0	0.53	ug/L			08/08/17 11:08	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/08/17 11:08	1
Styrene	1.0	U	1.0	0.23	ug/L			08/08/17 11:08	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/08/17 11:08	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/08/17 11:08	1
Toluene	1.0	U	1.0	0.23	ug/L			08/08/17 11:08	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/08/17 11:08	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/08/17 11:08	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/08/17 11:08	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/08/17 11:08	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/08/17 11:08	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/08/17 11:08	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/08/17 11:08	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/08/17 11:08	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/08/17 11:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/08/17 11:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/08/17 11:08	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/08/17 11:08	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-290307/7
Matrix: Water
Analysis Batch: 290307

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	10	U	10	1.4	ug/L			08/08/17 11:08	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/08/17 11:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/08/17 11:08	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/08/17 11:08	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/08/17 11:08	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/08/17 11:08	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/08/17 11:08	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/08/17 11:08	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/08/17 11:08	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/08/17 11:08	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/08/17 11:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		61 - 138		08/08/17 11:08	1
4-Bromofluorobenzene (Surr)	91		69 - 120		08/08/17 11:08	1
Toluene-d8 (Surr)	94		73 - 120		08/08/17 11:08	1
Dibromofluoromethane (Surr)	97		69 - 124		08/08/17 11:08	1

Lab Sample ID: LCS 240-290307/4
Matrix: Water
Analysis Batch: 290307

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	40.0	25.5		ug/L		64	35 - 131
Benzene	20.0	21.3		ug/L		106	79 - 120
Dichlorobromomethane	20.0	18.2		ug/L		91	79 - 125
Bromoform	20.0	14.2		ug/L		71	55 - 145
Bromomethane	20.0	18.1		ug/L		90	17 - 158
2-Butanone (MEK)	40.0	33.0		ug/L		82	43 - 149
Carbon disulfide	20.0	19.5		ug/L		97	49 - 141
Carbon tetrachloride	20.0	17.4		ug/L		87	55 - 171
Chlorobenzene	20.0	19.8		ug/L		99	80 - 120
Chloroethane	20.0	20.0		ug/L		100	10 - 149
Chloroform	20.0	19.3		ug/L		96	80 - 120
Chloromethane	20.0	16.3		ug/L		82	59 - 124
1,1-Dichloroethane	20.0	20.4		ug/L		102	74 - 120
1,2-Dichloroethane	20.0	17.8		ug/L		89	68 - 133
1,1-Dichloroethene	20.0	19.0		ug/L		95	65 - 127
1,2-Dichloropropane	20.0	21.9		ug/L		109	78 - 127
cis-1,3-Dichloropropene	20.0	19.9		ug/L		99	75 - 120
trans-1,3-Dichloropropene	20.0	17.2		ug/L		86	67 - 120
Ethylbenzene	20.0	19.2		ug/L		96	80 - 120
2-Hexanone	40.0	33.7		ug/L		84	28 - 169
Methylene Chloride	20.0	18.6		ug/L		93	64 - 140
4-Methyl-2-pentanone (MIBK)	40.0	35.8		ug/L		89	53 - 144
Styrene	20.0	19.8		ug/L		99	80 - 121
1,1,2,2-Tetrachloroethane	20.0	20.6		ug/L		103	58 - 122
Tetrachloroethene	20.0	19.5		ug/L		98	80 - 122

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290307/4
Matrix: Water
Analysis Batch: 290307

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	20.0	19.9		ug/L		100	78 - 120
Trichloroethene	20.0	20.6		ug/L		103	76 - 124
Vinyl chloride	20.0	17.5		ug/L		87	65 - 124
Xylenes, Total	40.0	38.5		ug/L		96	80 - 120
1,1,1-Trichloroethane	20.0	18.9		ug/L		94	64 - 147
1,1,2-Trichloroethane	20.0	20.3		ug/L		101	76 - 121
Cyclohexane	20.0	17.4		ug/L		87	66 - 135
1,2-Dibromo-3-Chloropropane	20.0	17.4		ug/L		87	50 - 130
Ethylene Dibromide	20.0	19.5		ug/L		97	80 - 120
Dichlorodifluoromethane	20.0	11.1		ug/L		56	42 - 141
cis-1,2-Dichloroethene	20.0	20.1		ug/L		100	77 - 120
trans-1,2-Dichloroethene	20.0	20.7		ug/L		104	74 - 124
Isopropylbenzene	20.0	19.3		ug/L		96	80 - 128
Methyl acetate	40.0	33.4		ug/L		83	63 - 137
Methyl tert-butyl ether	20.0	18.9		ug/L		94	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	17.8		ug/L		89	65 - 144
1,2,4-Trichlorobenzene	20.0	20.3		ug/L		101	34 - 141
1,2-Dichlorobenzene	20.0	20.6		ug/L		103	80 - 120
1,3-Dichlorobenzene	20.0	20.5		ug/L		102	80 - 120
1,4-Dichlorobenzene	20.0	20.0		ug/L		100	80 - 120
Trichlorofluoromethane	20.0	16.8		ug/L		84	27 - 176
Chlorodibromomethane	20.0	16.9		ug/L		85	64 - 129
Methylcyclohexane	20.0	16.3		ug/L		81	63 - 141
m-Xylene & p-Xylene	20.0	19.3		ug/L		96	80 - 120
o-Xylene	20.0	19.2		ug/L		96	80 - 120
Naphthalene	20.0	18.9		ug/L		95	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	79		61 - 138
4-Bromofluorobenzene (Surr)	92		69 - 120
Toluene-d8 (Surr)	97		73 - 120
Dibromofluoromethane (Surr)	99		69 - 124

Lab Sample ID: MB 240-290318/32
Matrix: Water
Analysis Batch: 290318

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/08/17 12:07	1
Benzene	1.0	U	1.0	0.28	ug/L			08/08/17 12:07	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/08/17 12:07	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/08/17 12:07	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/08/17 12:07	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/08/17 12:07	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/08/17 12:07	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/08/17 12:07	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/08/17 12:07	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-290318/32

Matrix: Water

Analysis Batch: 290318

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloroethane	1.0	U	1.0	0.41	ug/L			08/08/17 12:07	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/08/17 12:07	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/08/17 12:07	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/08/17 12:07	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/08/17 12:07	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/08/17 12:07	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/08/17 12:07	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/08/17 12:07	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/08/17 12:07	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/08/17 12:07	1
2-Hexanone	10	U	10	1.2	ug/L			08/08/17 12:07	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/08/17 12:07	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/08/17 12:07	1
Styrene	1.0	U	1.0	0.23	ug/L			08/08/17 12:07	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/08/17 12:07	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/08/17 12:07	1
Toluene	1.0	U	1.0	0.23	ug/L			08/08/17 12:07	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/08/17 12:07	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/08/17 12:07	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/08/17 12:07	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/08/17 12:07	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/08/17 12:07	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/08/17 12:07	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/08/17 12:07	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/08/17 12:07	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/08/17 12:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/08/17 12:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/08/17 12:07	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/08/17 12:07	1
Methyl acetate	10	U	10	1.4	ug/L			08/08/17 12:07	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/08/17 12:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/08/17 12:07	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/08/17 12:07	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/08/17 12:07	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/08/17 12:07	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/08/17 12:07	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/08/17 12:07	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/08/17 12:07	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/08/17 12:07	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/08/17 12:07	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	88		61 - 138		08/08/17 12:07	1
4-Bromofluorobenzene (Surr)	86		69 - 120		08/08/17 12:07	1
Toluene-d8 (Surr)	91		73 - 120		08/08/17 12:07	1
Dibromofluoromethane (Surr)	87		69 - 124		08/08/17 12:07	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290318/4

Matrix: Water

Analysis Batch: 290318

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	10.8		ug/L		54	35 - 131
Benzene	10.0	9.20		ug/L		92	79 - 120
Dichlorobromomethane	10.0	8.63		ug/L		86	79 - 125
Bromoform	10.0	6.81		ug/L		68	55 - 145
Bromomethane	10.0	10.4		ug/L		104	17 - 158
2-Butanone (MEK)	20.0	15.1		ug/L		75	43 - 149
Carbon disulfide	10.0	8.37		ug/L		84	49 - 141
Carbon tetrachloride	10.0	7.07		ug/L		71	55 - 171
Chlorobenzene	10.0	10.0		ug/L		100	80 - 120
Chloroethane	10.0	10.5		ug/L		105	10 - 149
Chloroform	10.0	8.45		ug/L		84	80 - 120
Chloromethane	10.0	9.54		ug/L		95	59 - 124
1,1-Dichloroethane	10.0	8.31		ug/L		83	74 - 120
1,2-Dichloroethane	10.0	9.11		ug/L		91	68 - 133
1,1-Dichloroethene	10.0	9.15		ug/L		92	65 - 127
1,2-Dichloropropane	10.0	9.69		ug/L		97	78 - 127
cis-1,3-Dichloropropene	10.0	8.49		ug/L		85	75 - 120
trans-1,3-Dichloropropene	10.0	8.16		ug/L		82	67 - 120
Ethylbenzene	10.0	9.89		ug/L		99	80 - 120
2-Hexanone	20.0	16.2		ug/L		81	28 - 169
Methylene Chloride	10.0	8.22		ug/L		82	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	15.6		ug/L		78	53 - 144
Styrene	10.0	9.68		ug/L		97	80 - 121
1,1,2,2-Tetrachloroethane	10.0	9.90		ug/L		99	58 - 122
Tetrachloroethene	10.0	10.2		ug/L		102	80 - 122
Toluene	10.0	10.0		ug/L		100	78 - 120
Trichloroethene	10.0	9.43		ug/L		94	76 - 124
Vinyl chloride	10.0	9.68		ug/L		97	65 - 124
Xylenes, Total	20.0	19.3		ug/L		96	80 - 120
1,1,1-Trichloroethane	10.0	7.56		ug/L		76	64 - 147
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	76 - 121
Cyclohexane	10.0	8.25		ug/L		82	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	6.62		ug/L		66	50 - 130
Ethylene Dibromide	10.0	9.69		ug/L		97	80 - 120
Dichlorodifluoromethane	10.0	6.82		ug/L		68	42 - 141
cis-1,2-Dichloroethene	10.0	8.16		ug/L		82	77 - 120
trans-1,2-Dichloroethene	10.0	8.72		ug/L		87	74 - 124
Isopropylbenzene	10.0	9.53		ug/L		95	80 - 128
Methyl acetate	20.0	13.5		ug/L		68	63 - 137
Methyl tert-butyl ether	10.0	7.27		ug/L		73	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.8		ug/L		108	65 - 144
1,2,4-Trichlorobenzene	10.0	7.93		ug/L		79	34 - 141
1,2-Dichlorobenzene	10.0	9.99		ug/L		100	80 - 120
1,3-Dichlorobenzene	10.0	10.3		ug/L		103	80 - 120
1,4-Dichlorobenzene	10.0	9.96		ug/L		100	80 - 120
Trichlorofluoromethane	10.0	10.6		ug/L		106	27 - 176
Chlorodibromomethane	10.0	8.74		ug/L		87	64 - 129

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290318/4
Matrix: Water
Analysis Batch: 290318

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylcyclohexane	10.0	8.66		ug/L		87	63 - 141
m-Xylene & p-Xylene	10.0	9.62		ug/L		96	80 - 120
o-Xylene	10.0	9.63		ug/L		96	80 - 120
Naphthalene	10.0	6.53		ug/L		65	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	77		61 - 138
4-Bromofluorobenzene (Surr)	91		69 - 120
Toluene-d8 (Surr)	93		73 - 120
Dibromofluoromethane (Surr)	78		69 - 124

Lab Sample ID: MB 240-290477/7
Matrix: Water
Analysis Batch: 290477

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/09/17 12:44	1
Benzene	1.0	U	1.0	0.28	ug/L			08/09/17 12:44	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/09/17 12:44	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/09/17 12:44	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/09/17 12:44	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/09/17 12:44	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/09/17 12:44	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/09/17 12:44	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/09/17 12:44	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/09/17 12:44	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/09/17 12:44	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/09/17 12:44	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/09/17 12:44	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/09/17 12:44	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/09/17 12:44	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/09/17 12:44	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/09/17 12:44	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/09/17 12:44	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/09/17 12:44	1
2-Hexanone	10	U	10	1.2	ug/L			08/09/17 12:44	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/09/17 12:44	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/09/17 12:44	1
Styrene	1.0	U	1.0	0.23	ug/L			08/09/17 12:44	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/09/17 12:44	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/09/17 12:44	1
Toluene	1.0	U	1.0	0.23	ug/L			08/09/17 12:44	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/09/17 12:44	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/09/17 12:44	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/09/17 12:44	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/09/17 12:44	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/09/17 12:44	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/09/17 12:44	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-290477/7
Matrix: Water
Analysis Batch: 290477

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/09/17 12:44	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/09/17 12:44	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/09/17 12:44	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/09/17 12:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/09/17 12:44	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/09/17 12:44	1
Methyl acetate	10	U	10	1.4	ug/L			08/09/17 12:44	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/09/17 12:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/09/17 12:44	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/09/17 12:44	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/09/17 12:44	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/09/17 12:44	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/09/17 12:44	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/09/17 12:44	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/09/17 12:44	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/09/17 12:44	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/09/17 12:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		61 - 138		08/09/17 12:44	1
4-Bromofluorobenzene (Surr)	88		69 - 120		08/09/17 12:44	1
Toluene-d8 (Surr)	90		73 - 120		08/09/17 12:44	1
Dibromofluoromethane (Surr)	86		69 - 124		08/09/17 12:44	1

Lab Sample ID: LCS 240-290477/4
Matrix: Water
Analysis Batch: 290477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	15.5		ug/L		77	35 - 131
Benzene	10.0	9.17		ug/L		92	79 - 120
Dichlorobromomethane	10.0	8.71		ug/L		87	79 - 125
Bromoform	10.0	7.07		ug/L		71	55 - 145
Bromomethane	10.0	9.77		ug/L		98	17 - 158
2-Butanone (MEK)	20.0	16.3		ug/L		81	43 - 149
Carbon disulfide	10.0	9.09		ug/L		91	49 - 141
Carbon tetrachloride	10.0	7.79		ug/L		78	55 - 171
Chlorobenzene	10.0	10.0		ug/L		100	80 - 120
Chloroethane	10.0	9.88		ug/L		99	10 - 149
Chloroform	10.0	9.21		ug/L		92	80 - 120
Chloromethane	10.0	9.69		ug/L		97	59 - 124
1,1-Dichloroethane	10.0	9.11		ug/L		91	74 - 120
1,2-Dichloroethane	10.0	9.01		ug/L		90	68 - 133
1,1-Dichloroethene	10.0	10.2		ug/L		102	65 - 127
1,2-Dichloropropane	10.0	9.82		ug/L		98	78 - 127
cis-1,3-Dichloropropene	10.0	8.72		ug/L		87	75 - 120
trans-1,3-Dichloropropene	10.0	8.03		ug/L		80	67 - 120
Ethylbenzene	10.0	9.75		ug/L		97	80 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290477/4

Matrix: Water

Analysis Batch: 290477

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	20.0	15.8		ug/L		79	28 - 169
Methylene Chloride	10.0	8.85		ug/L		89	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	15.0		ug/L		75	53 - 144
Styrene	10.0	9.66		ug/L		97	80 - 121
1,1,2,2-Tetrachloroethane	10.0	9.34		ug/L		93	58 - 122
Tetrachloroethene	10.0	10.1		ug/L		101	80 - 122
Toluene	10.0	10.1		ug/L		101	78 - 120
Trichloroethene	10.0	9.26		ug/L		93	76 - 124
Vinyl chloride	10.0	9.63		ug/L		96	65 - 124
Xylenes, Total	20.0	19.1		ug/L		96	80 - 120
1,1,1-Trichloroethane	10.0	8.40		ug/L		84	64 - 147
1,1,2-Trichloroethane	10.0	10.3		ug/L		103	76 - 121
Cyclohexane	10.0	8.87		ug/L		89	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	6.61		ug/L		66	50 - 130
Ethylene Dibromide	10.0	9.49		ug/L		95	80 - 120
Dichlorodifluoromethane	10.0	6.99		ug/L		70	42 - 141
cis-1,2-Dichloroethene	10.0	9.13		ug/L		91	77 - 120
trans-1,2-Dichloroethene	10.0	9.44		ug/L		94	74 - 124
Isopropylbenzene	10.0	9.45		ug/L		94	80 - 128
Methyl acetate	20.0	15.0		ug/L		75	63 - 137
Methyl tert-butyl ether	10.0	7.60		ug/L		76	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.3		ug/L		113	65 - 144
1,2,4-Trichlorobenzene	10.0	8.35		ug/L		83	34 - 141
1,2-Dichlorobenzene	10.0	9.78		ug/L		98	80 - 120
1,3-Dichlorobenzene	10.0	9.91		ug/L		99	80 - 120
1,4-Dichlorobenzene	10.0	9.83		ug/L		98	80 - 120
Trichlorofluoromethane	10.0	11.4		ug/L		114	27 - 176
Chlorodibromomethane	10.0	8.81		ug/L		88	64 - 129
Methylcyclohexane	10.0	8.56		ug/L		86	63 - 141
m-Xylene & p-Xylene	10.0	9.55		ug/L		96	80 - 120
o-Xylene	10.0	9.59		ug/L		96	80 - 120
Naphthalene	10.0	6.79		ug/L		68	31 - 127

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	82		61 - 138
4-Bromofluorobenzene (Surr)	93		69 - 120
Toluene-d8 (Surr)	94		73 - 120
Dibromofluoromethane (Surr)	86		69 - 124

QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

GC/MS VOA

Prep Batch: 289326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82983-13	S-170726-RA-12	Total/NA	Solid	5035	
MB 240-289326/1-A	Method Blank	Total/NA	Solid	5035	
LCS 240-289326/2-A	Lab Control Sample	Total/NA	Solid	5035	

Analysis Batch: 289366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-289326/1-A	Method Blank	Total/NA	Solid	8260B	289326
LCS 240-289326/2-A	Lab Control Sample	Total/NA	Solid	8260B	289326

Analysis Batch: 289521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82983-13	S-170726-RA-12	Total/NA	Solid	8260B	289326

Analysis Batch: 290151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82983-1	W-170726-RA-29	Total/NA	Water	8260B	
240-82983-2	W-170726-RA-30	Total/NA	Water	8260B	
240-82983-3	W-170726-RA-31	Total/NA	Water	8260B	
MB 240-290151/6	Method Blank	Total/NA	Water	8260B	
LCS 240-290151/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 290307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82983-4	W-170727-RA-39	Total/NA	Water	8260B	
240-82983-5	W-170727-RA-40	Total/NA	Water	8260B	
240-82983-6	W-170727-RA-41	Total/NA	Water	8260B	
240-82983-7	W-170727-RA-42	Total/NA	Water	8260B	
240-82983-8	W-170727-RA-34	Total/NA	Water	8260B	
240-82983-9	W-170727-RA-35	Total/NA	Water	8260B	
MB 240-290307/7	Method Blank	Total/NA	Water	8260B	
LCS 240-290307/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 290318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82983-10	W-170727-RA-36	Total/NA	Water	8260B	
240-82983-14	TRIP BLANK	Total/NA	Water	8260B	
MB 240-290318/32	Method Blank	Total/NA	Water	8260B	
LCS 240-290318/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 290477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82983-11	W-170727-RA-37	Total/NA	Water	8260B	
240-82983-12	W-170726-RA-32	Total/NA	Water	8260B	
MB 240-290477/7	Method Blank	Total/NA	Water	8260B	
LCS 240-290477/4	Lab Control Sample	Total/NA	Water	8260B	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

General Chemistry

Analysis Batch: 289068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-82983-13	S-170726-RA-12	Total/NA	Solid	Moisture	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170726-RA-29

Date Collected: 07/26/17 12:00

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		6.67	290151	08/07/17 19:07	LEE	TAL CAN

Client Sample ID: W-170726-RA-30

Date Collected: 07/26/17 12:30

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		14.29	290151	08/07/17 19:30	LEE	TAL CAN

Client Sample ID: W-170726-RA-31

Date Collected: 07/26/17 13:50

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		500	290151	08/07/17 19:52	LEE	TAL CAN

Client Sample ID: W-170727-RA-39

Date Collected: 07/27/17 09:20

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		250	290307	08/08/17 16:24	HMB	TAL CAN

Client Sample ID: W-170727-RA-40

Date Collected: 07/27/17 09:20

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	290307	08/08/17 16:46	HMB	TAL CAN

Client Sample ID: W-170727-RA-41

Date Collected: 07/27/17 10:15

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		333.33	290307	08/08/17 17:09	HMB	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: W-170727-RA-42

Date Collected: 07/27/17 10:15

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		333.33	290307	08/08/17 17:30	HMB	TAL CAN

Client Sample ID: W-170727-RA-34

Date Collected: 07/27/17 09:10

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		6.25	290307	08/08/17 17:53	HMB	TAL CAN

Client Sample ID: W-170727-RA-35

Date Collected: 07/27/17 10:00

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		6.25	290307	08/08/17 18:16	HMB	TAL CAN

Client Sample ID: W-170727-RA-36

Date Collected: 07/27/17 10:55

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	290318	08/08/17 17:00	LEE	TAL CAN

Client Sample ID: W-170727-RA-37

Date Collected: 07/27/17 13:20

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2.5	290477	08/09/17 13:28	LEE	TAL CAN

Client Sample ID: W-170726-RA-32

Date Collected: 07/26/17 14:10

Date Received: 07/28/17 09:30

Lab Sample ID: 240-82983-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	290477	08/09/17 13:06	LEE	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Client Sample ID: S-170726-RA-12

Lab Sample ID: 240-82983-13

Date Collected: 07/26/17 14:00

Matrix: Solid

Date Received: 07/28/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	289068	07/28/17 15:42	PW	TAL CAN

Client Sample ID: S-170726-RA-12

Lab Sample ID: 240-82983-13

Date Collected: 07/26/17 14:00

Matrix: Solid

Date Received: 07/28/17 09:30

Percent Solids: 98.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			289326	07/31/17 10:46	LAM	TAL CAN
Total/NA	Analysis	8260B		1	289521	08/01/17 15:37	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-82983-14

Date Collected: 07/26/17 00:00

Matrix: Water

Date Received: 07/28/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	290318	08/08/17 18:07	LEE	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-82983-1

Laboratory: TestAmerica Canton

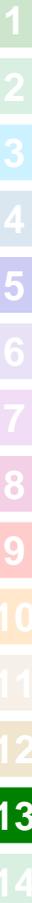
Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Minnesota	NELAP	5	039-999-348	12-31-17 *

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

* Accreditation/Certification renewal pending - accreditation/certification considered valid.





CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
 St. Paul, Minnesota 55112 United States
 Phone: (651) 639-0913 Fax: (651) 639-0923

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 88751-40				Laboratory Name: Test America				Lab Location: TA NC				SSOW ID:							
Project Name: 6714 Walker St				Lab Contact: Denise Heckler				Lab Quote No:				Cooler No:							
Project Location: SLP				SAMPLE TYPE				CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)							
Chemistry Contact: G. Anderson				Matrix Code (see back of COC) Grab (G) or Comp (C)				Unpreserved Hydrochloric Acid (HCl) Nitric Acid (HNO ₃) Sulfuric Acid (H ₂ SO ₄) Sodium Hydroxide (NaOH) Methanol/Water (Soil VOC) EnCores 3x5-g, 1x25-g Other:				Total Containers/Sample VOCs				Carrier:			
Sampler(s): Adam M. Barnes																Airbill No:			
DATE (mm/dd/yy)				TIME (hh:mm)								Date Shipped:							
SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)				COMMENTS/SPECIAL INSTRUCTIONS:															
1	W-170726-PA-29			7/24/17	1200	W6	3								3	X			
2	W-170726-PA-30			7/24/17	1230	W6	3								3	Y			
3	W-170726-PA-31			7/24/17	1350	W6	3								3	Y			
4	W-170727-PA-39			7/27/17	920	W6	3								3	X			
5	W-170727-PA-40			7/27/17	920	W6	3								3	Y			
6	W-170727-PA-41			7/27/17	1015	W6	3								3	Y			
7	W-170727-PA-42			7/27/17	1015	W6	3								3	Y			
8	W-170727-PA-34			7/27/17	910	W6	3								3	X			
9	W-170727-PA-35			7/27/17	1000	W6	3								3	X			
10	W-170727-PA-36			7/27/17	1055	W6	3								3	X			
11	W-170727-PA-37			7/27/17	1320	W6	3								3	X			
12	W-170726-PA-32			7/24/17	1410	W6	3								3	X			
13	S-170726-PA-12			7/24/17	1400	SO								3		X			
14																			
15	trip blank						1								1	X			
TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:							Total Number of Containers: 40					Notes/ Special Requirements:							
All Samples in Cooler must be on COC																			
RELINQUISHED BY		COMPANY		DATE		TIME						RECEIVED BY		COMPANY		DATE		TIME	
1.		CRA		7/27/17		16:00		1.		TAC		07/28/17		930					
2.								2.											
3.								3.											

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY



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8/14/2017

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TestAmerica Canton Sample Receipt Form/Narrative Login # : 82983
Canton Facility

Client GHD Site Name SLP Cooler unpacked by: (DSS)
Cooler Received on 07/28/17 Opened on 07/28/17
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____
Packing material used: ~~Bubble Wrap~~ Foam ~~Plastic Bag~~ None Other _____
COOLANT: ~~Wet Ice~~ Blue Ice Dry Ice Water None

- Cooler temperature upon receipt See Multiple Cooler Form
IR GUN# IR-8 (CF -0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #36 (CF +0 °C) Observed Cooler Temp. 37 °C Corrected Cooler Temp. 37 °C
- Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
-Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
- Shippers' packing slip attached to the cooler(s)? Yes No
- Did custody papers accompany the sample(s)? Yes No
- Were the custody papers relinquished & signed in the appropriate place? Yes No
- Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
- Did all bottles arrive in good condition (Unbroken)? Yes No
- Could all bottle labels be reconciled with the COC? Yes No
- Were correct bottle(s) used for the test(s) indicated? Yes No
- Sufficient quantity received to perform indicated analyses? Yes No
- Are these work share samples? Yes No
If yes, Questions 11-15 have been checked at the originating laboratory.
- Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC697954
- Were VOAs on the COC? Yes No
- Were air bubbles >6 mm in any VOA vials?  ← Larger than this. Yes No NA
- Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered Yes No
- Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
Concerning _____

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: _____

17. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-83023-1

Client Project/Site: 88751, Hinshaw & Culbertson

Revision: 1

For:

GHD Services Inc.

1801 Old Highway 8 NW

Suite 114

St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson



Authorized for release by:

10/16/2017 10:18:54 AM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Job ID: 240-83023-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-83023-1

Comments

A revised report was provided on October 10, 2017. Sample ID [S-170728-RA-13](#) was corrected.

Receipt

The samples were received on 7/29/2017 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.4° C.

GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for preparation batch 240-289355 and analytical batch 240-289521 recovered outside control limits for the following analytes: Cyclohexane, Dichloro-difluoromethane, and Methylcyclohexane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The following samples were submitted for volatile analysis with insufficient preservation (pH>2): W-170727-RA-33 (240-83023-1), W-170727-RA-38 (240-83023-2) and W-170727-RA-43 (240-83023-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

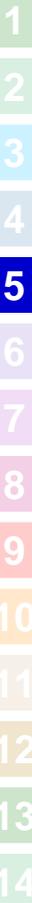
Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-83023-1	W-170727-RA-33	Water	07/27/17 15:50	07/29/17 09:20
240-83023-2	W-170727-RA-38	Water	07/27/17 14:05	07/29/17 09:20
240-83023-3	W-170727-RA-43	Water	07/27/17 13:35	07/29/17 09:20
240-83023-4	S-170728-RA-13	Solid	07/28/17 09:15	07/29/17 09:20
240-83023-5	TRIP BLANK	Water	07/27/17 00:00	07/29/17 09:20

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Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: W-170727-RA-33

Lab Sample ID: 240-83023-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	24		1.0	0.28	ug/L	1		8260B	Total/NA
Ethylbenzene	7.7		1.0	0.26	ug/L	1		8260B	Total/NA
Tetrachloroethene	8.6		1.0	0.30	ug/L	1		8260B	Total/NA
Toluene	0.69	J	1.0	0.23	ug/L	1		8260B	Total/NA
Trichloroethene	0.36	J	1.0	0.33	ug/L	1		8260B	Total/NA
Vinyl chloride	2.0		1.0	0.45	ug/L	1		8260B	Total/NA
Xylenes, Total	8.3		2.0	0.24	ug/L	1		8260B	Total/NA
Cyclohexane	0.74	J	1.0	0.44	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.78	J	1.0	0.30	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	6.5		1.0	0.29	ug/L	1		8260B	Total/NA
Isopropylbenzene	2.6		1.0	0.21	ug/L	1		8260B	Total/NA
Naphthalene	21		1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: W-170727-RA-38

Lab Sample ID: 240-83023-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	45		2.0	0.56	ug/L	2		8260B	Total/NA
Ethylbenzene	11		2.0	0.52	ug/L	2		8260B	Total/NA
Toluene	0.83	J	2.0	0.46	ug/L	2		8260B	Total/NA
Vinyl chloride	34		2.0	0.90	ug/L	2		8260B	Total/NA
Xylenes, Total	15		4.0	0.48	ug/L	2		8260B	Total/NA
cis-1,2-Dichloroethene	22		2.0	0.60	ug/L	2		8260B	Total/NA
trans-1,2-Dichloroethene	21		2.0	0.58	ug/L	2		8260B	Total/NA
Isopropylbenzene	2.9		2.0	0.42	ug/L	2		8260B	Total/NA
Naphthalene	58		2.0	0.50	ug/L	2		8260B	Total/NA

Client Sample ID: W-170727-RA-43

Lab Sample ID: 240-83023-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	15		5.0	1.4	ug/L	5		8260B	Total/NA
1,1-Dichloroethene	1.9	J	5.0	1.4	ug/L	5		8260B	Total/NA
Tetrachloroethene	77		5.0	1.5	ug/L	5		8260B	Total/NA
Vinyl chloride	65		5.0	2.3	ug/L	5		8260B	Total/NA
Xylenes, Total	4.3	J	10	1.2	ug/L	5		8260B	Total/NA
cis-1,2-Dichloroethene	150		5.0	1.5	ug/L	5		8260B	Total/NA
trans-1,2-Dichloroethene	28		5.0	1.5	ug/L	5		8260B	Total/NA
Naphthalene	47		5.0	1.3	ug/L	5		8260B	Total/NA

Client Sample ID: S-170728-RA-13

Lab Sample ID: 240-83023-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.6		4.6	0.29	ug/Kg	1	☼	8260B	Total/NA
1,1-Dichloroethene	0.77	J	4.6	0.50	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	3.3	J B	4.6	0.22	ug/Kg	1	☼	8260B	Total/NA
Toluene	0.55	J	4.6	0.31	ug/Kg	1	☼	8260B	Total/NA
Trichloroethene	0.57	J	4.6	0.38	ug/Kg	1	☼	8260B	Total/NA
Vinyl chloride	6.8		4.6	0.26	ug/Kg	1	☼	8260B	Total/NA
Xylenes, Total	0.50	J	9.2	0.37	ug/Kg	1	☼	8260B	Total/NA
Cyclohexane	0.88	J*	9.2	0.19	ug/Kg	1	☼	8260B	Total/NA
cis-1,2-Dichloroethene	67		4.6	0.26	ug/Kg	1	☼	8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: S-170728-RA-13 (Continued)

Lab Sample ID: 240-83023-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
trans-1,2-Dichloroethene	23		4.6	0.35	ug/Kg	1		☼	8260B	Total/NA
Isopropylbenzene	0.21	J	4.6	0.18	ug/Kg	1		☼	8260B	Total/NA
Methylcyclohexane	2.2	J*	9.2	0.21	ug/Kg	1		☼	8260B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83023-5

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: W-170727-RA-33

Lab Sample ID: 240-83023-1

Date Collected: 07/27/17 15:50

Matrix: Water

Date Received: 07/29/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/02/17 14:16	1
Benzene	24		1.0	0.28	ug/L			08/02/17 14:16	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/02/17 14:16	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/02/17 14:16	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/02/17 14:16	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/02/17 14:16	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/02/17 14:16	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/02/17 14:16	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/02/17 14:16	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/02/17 14:16	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/02/17 14:16	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/02/17 14:16	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/02/17 14:16	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/02/17 14:16	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/02/17 14:16	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/02/17 14:16	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/02/17 14:16	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/02/17 14:16	1
Ethylbenzene	7.7		1.0	0.26	ug/L			08/02/17 14:16	1
2-Hexanone	10	U	10	1.2	ug/L			08/02/17 14:16	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/02/17 14:16	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/02/17 14:16	1
Styrene	1.0	U	1.0	0.23	ug/L			08/02/17 14:16	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/02/17 14:16	1
Tetrachloroethene	8.6		1.0	0.30	ug/L			08/02/17 14:16	1
Toluene	0.69	J	1.0	0.23	ug/L			08/02/17 14:16	1
Trichloroethene	0.36	J	1.0	0.33	ug/L			08/02/17 14:16	1
Vinyl chloride	2.0		1.0	0.45	ug/L			08/02/17 14:16	1
Xylenes, Total	8.3		2.0	0.24	ug/L			08/02/17 14:16	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/02/17 14:16	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/02/17 14:16	1
Cyclohexane	0.74	J	1.0	0.44	ug/L			08/02/17 14:16	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/02/17 14:16	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/02/17 14:16	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/02/17 14:16	1
cis-1,2-Dichloroethene	0.78	J	1.0	0.30	ug/L			08/02/17 14:16	1
trans-1,2-Dichloroethene	6.5		1.0	0.29	ug/L			08/02/17 14:16	1
Isopropylbenzene	2.6		1.0	0.21	ug/L			08/02/17 14:16	1
Methyl acetate	10	U	10	1.4	ug/L			08/02/17 14:16	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/02/17 14:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/02/17 14:16	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/02/17 14:16	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/02/17 14:16	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/02/17 14:16	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/02/17 14:16	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/02/17 14:16	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/02/17 14:16	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/02/17 14:16	1
Naphthalene	21		1.0	0.25	ug/L			08/02/17 14:16	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: W-170727-RA-33

Lab Sample ID: 240-83023-1

Date Collected: 07/27/17 15:50

Matrix: Water

Date Received: 07/29/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	80		61 - 138		08/02/17 14:16	1
4-Bromofluorobenzene (Surr)	92		69 - 120		08/02/17 14:16	1
Toluene-d8 (Surr)	90		73 - 120		08/02/17 14:16	1
Dibromofluoromethane (Surr)	81		69 - 124		08/02/17 14:16	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: W-170727-RA-38

Lab Sample ID: 240-83023-2

Date Collected: 07/27/17 14:05

Matrix: Water

Date Received: 07/29/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20	U	20	3.5	ug/L			08/02/17 14:38	2
Benzene	45		2.0	0.56	ug/L			08/02/17 14:38	2
Dichlorobromomethane	2.0	U	2.0	0.60	ug/L			08/02/17 14:38	2
Bromoform	2.0	U	2.0	0.86	ug/L			08/02/17 14:38	2
Bromomethane	2.0	U	2.0	0.84	ug/L			08/02/17 14:38	2
2-Butanone (MEK)	20	U	20	2.0	ug/L			08/02/17 14:38	2
Carbon disulfide	2.0	U	2.0	0.68	ug/L			08/02/17 14:38	2
Carbon tetrachloride	2.0	U	2.0	0.70	ug/L			08/02/17 14:38	2
Chlorobenzene	2.0	U	2.0	0.64	ug/L			08/02/17 14:38	2
Chloroethane	2.0	U	2.0	0.82	ug/L			08/02/17 14:38	2
Chloroform	2.0	U	2.0	0.62	ug/L			08/02/17 14:38	2
Chloromethane	2.0	U	2.0	0.86	ug/L			08/02/17 14:38	2
1,1-Dichloroethane	2.0	U	2.0	0.50	ug/L			08/02/17 14:38	2
1,2-Dichloroethane	2.0	U	2.0	0.60	ug/L			08/02/17 14:38	2
1,1-Dichloroethene	2.0	U	2.0	0.54	ug/L			08/02/17 14:38	2
1,2-Dichloropropane	2.0	U	2.0	0.60	ug/L			08/02/17 14:38	2
cis-1,3-Dichloropropene	2.0	U	2.0	0.52	ug/L			08/02/17 14:38	2
trans-1,3-Dichloropropene	2.0	U	2.0	0.62	ug/L			08/02/17 14:38	2
Ethylbenzene	11		2.0	0.52	ug/L			08/02/17 14:38	2
2-Hexanone	20	U	20	2.5	ug/L			08/02/17 14:38	2
Methylene Chloride	2.0	U	2.0	1.1	ug/L			08/02/17 14:38	2
4-Methyl-2-pentanone (MIBK)	20	U	20	1.4	ug/L			08/02/17 14:38	2
Styrene	2.0	U	2.0	0.46	ug/L			08/02/17 14:38	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.64	ug/L			08/02/17 14:38	2
Tetrachloroethene	2.0	U	2.0	0.60	ug/L			08/02/17 14:38	2
Toluene	0.83	J	2.0	0.46	ug/L			08/02/17 14:38	2
Trichloroethene	2.0	U	2.0	0.66	ug/L			08/02/17 14:38	2
Vinyl chloride	34		2.0	0.90	ug/L			08/02/17 14:38	2
Xylenes, Total	15		4.0	0.48	ug/L			08/02/17 14:38	2
1,1,1-Trichloroethane	2.0	U	2.0	0.46	ug/L			08/02/17 14:38	2
1,1,2-Trichloroethane	2.0	U	2.0	0.68	ug/L			08/02/17 14:38	2
Cyclohexane	2.0	U	2.0	0.88	ug/L			08/02/17 14:38	2
1,2-Dibromo-3-Chloropropane	4.0	U	4.0	0.94	ug/L			08/02/17 14:38	2
Ethylene Dibromide	2.0	U	2.0	0.46	ug/L			08/02/17 14:38	2
Dichlorodifluoromethane	2.0	U	2.0	1.0	ug/L			08/02/17 14:38	2
cis-1,2-Dichloroethene	22		2.0	0.60	ug/L			08/02/17 14:38	2
trans-1,2-Dichloroethene	21		2.0	0.58	ug/L			08/02/17 14:38	2
Isopropylbenzene	2.9		2.0	0.42	ug/L			08/02/17 14:38	2
Methyl acetate	20	U	20	2.9	ug/L			08/02/17 14:38	2
Methyl tert-butyl ether	2.0	U	2.0	0.54	ug/L			08/02/17 14:38	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0	0.82	ug/L			08/02/17 14:38	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.54	ug/L			08/02/17 14:38	2
1,2-Dichlorobenzene	2.0	U	2.0	0.52	ug/L			08/02/17 14:38	2
1,3-Dichlorobenzene	2.0	U	2.0	0.64	ug/L			08/02/17 14:38	2
1,4-Dichlorobenzene	2.0	U	2.0	0.46	ug/L			08/02/17 14:38	2
Trichlorofluoromethane	2.0	U	2.0	1.0	ug/L			08/02/17 14:38	2
Chlorodibromomethane	2.0	U	2.0	0.50	ug/L			08/02/17 14:38	2
Methylcyclohexane	2.0	U	2.0	0.90	ug/L			08/02/17 14:38	2
Naphthalene	58		2.0	0.50	ug/L			08/02/17 14:38	2

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: W-170727-RA-38

Date Collected: 07/27/17 14:05

Date Received: 07/29/17 09:20

Lab Sample ID: 240-83023-2

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	79		61 - 138		08/02/17 14:38	2
4-Bromofluorobenzene (Surr)	91		69 - 120		08/02/17 14:38	2
Toluene-d8 (Surr)	91		73 - 120		08/02/17 14:38	2
Dibromofluoromethane (Surr)	81		69 - 124		08/02/17 14:38	2

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: W-170727-RA-43

Lab Sample ID: 240-83023-3

Date Collected: 07/27/17 13:35

Matrix: Water

Date Received: 07/29/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	50	U	50	8.8	ug/L			08/02/17 15:00	5
Benzene	15		5.0	1.4	ug/L			08/02/17 15:00	5
Dichlorobromomethane	5.0	U	5.0	1.5	ug/L			08/02/17 15:00	5
Bromoform	5.0	U	5.0	2.2	ug/L			08/02/17 15:00	5
Bromomethane	5.0	U	5.0	2.1	ug/L			08/02/17 15:00	5
2-Butanone (MEK)	50	U	50	5.1	ug/L			08/02/17 15:00	5
Carbon disulfide	5.0	U	5.0	1.7	ug/L			08/02/17 15:00	5
Carbon tetrachloride	5.0	U	5.0	1.8	ug/L			08/02/17 15:00	5
Chlorobenzene	5.0	U	5.0	1.6	ug/L			08/02/17 15:00	5
Chloroethane	5.0	U	5.0	2.1	ug/L			08/02/17 15:00	5
Chloroform	5.0	U	5.0	1.6	ug/L			08/02/17 15:00	5
Chloromethane	5.0	U	5.0	2.2	ug/L			08/02/17 15:00	5
1,1-Dichloroethane	5.0	U	5.0	1.3	ug/L			08/02/17 15:00	5
1,2-Dichloroethane	5.0	U	5.0	1.5	ug/L			08/02/17 15:00	5
1,1-Dichloroethene	1.9	J	5.0	1.4	ug/L			08/02/17 15:00	5
1,2-Dichloropropane	5.0	U	5.0	1.5	ug/L			08/02/17 15:00	5
cis-1,3-Dichloropropene	5.0	U	5.0	1.3	ug/L			08/02/17 15:00	5
trans-1,3-Dichloropropene	5.0	U	5.0	1.6	ug/L			08/02/17 15:00	5
Ethylbenzene	5.0	U	5.0	1.3	ug/L			08/02/17 15:00	5
2-Hexanone	50	U	50	6.2	ug/L			08/02/17 15:00	5
Methylene Chloride	5.0	U	5.0	2.7	ug/L			08/02/17 15:00	5
4-Methyl-2-pentanone (MIBK)	50	U	50	3.6	ug/L			08/02/17 15:00	5
Styrene	5.0	U	5.0	1.2	ug/L			08/02/17 15:00	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.6	ug/L			08/02/17 15:00	5
Tetrachloroethene	77		5.0	1.5	ug/L			08/02/17 15:00	5
Toluene	5.0	U	5.0	1.2	ug/L			08/02/17 15:00	5
Trichloroethene	5.0	U	5.0	1.7	ug/L			08/02/17 15:00	5
Vinyl chloride	65		5.0	2.3	ug/L			08/02/17 15:00	5
Xylenes, Total	4.3	J	10	1.2	ug/L			08/02/17 15:00	5
1,1,1-Trichloroethane	5.0	U	5.0	1.2	ug/L			08/02/17 15:00	5
1,1,2-Trichloroethane	5.0	U	5.0	1.7	ug/L			08/02/17 15:00	5
Cyclohexane	5.0	U	5.0	2.2	ug/L			08/02/17 15:00	5
1,2-Dibromo-3-Chloropropane	10	U	10	2.4	ug/L			08/02/17 15:00	5
Ethylene Dibromide	5.0	U	5.0	1.2	ug/L			08/02/17 15:00	5
Dichlorodifluoromethane	5.0	U	5.0	2.5	ug/L			08/02/17 15:00	5
cis-1,2-Dichloroethene	150		5.0	1.5	ug/L			08/02/17 15:00	5
trans-1,2-Dichloroethene	28		5.0	1.5	ug/L			08/02/17 15:00	5
Isopropylbenzene	5.0	U	5.0	1.1	ug/L			08/02/17 15:00	5
Methyl acetate	50	U	50	7.2	ug/L			08/02/17 15:00	5
Methyl tert-butyl ether	5.0	U	5.0	1.4	ug/L			08/02/17 15:00	5
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	2.1	ug/L			08/02/17 15:00	5
1,2,4-Trichlorobenzene	5.0	U	5.0	1.4	ug/L			08/02/17 15:00	5
1,2-Dichlorobenzene	5.0	U	5.0	1.3	ug/L			08/02/17 15:00	5
1,3-Dichlorobenzene	5.0	U	5.0	1.6	ug/L			08/02/17 15:00	5
1,4-Dichlorobenzene	5.0	U	5.0	1.2	ug/L			08/02/17 15:00	5
Trichlorofluoromethane	5.0	U	5.0	2.5	ug/L			08/02/17 15:00	5
Chlorodibromomethane	5.0	U	5.0	1.3	ug/L			08/02/17 15:00	5
Methylcyclohexane	5.0	U	5.0	2.3	ug/L			08/02/17 15:00	5
Naphthalene	47		5.0	1.3	ug/L			08/02/17 15:00	5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: W-170727-RA-43

Lab Sample ID: 240-83023-3

Date Collected: 07/27/17 13:35

Matrix: Water

Date Received: 07/29/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	84		61 - 138		08/02/17 15:00	5
4-Bromofluorobenzene (Surr)	93		69 - 120		08/02/17 15:00	5
Toluene-d8 (Surr)	90		73 - 120		08/02/17 15:00	5
Dibromofluoromethane (Surr)	83		69 - 124		08/02/17 15:00	5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: S-170728-RA-13

Lab Sample ID: 240-83023-4

Date Collected: 07/28/17 09:15

Matrix: Solid

Date Received: 07/29/17 09:20

Percent Solids: 83.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	18	U	18	2.8	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Benzene	5.6		4.6	0.29	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Dichlorobromomethane	4.6	U	4.6	0.30	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Bromoform	4.6	U	4.6	0.37	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Bromomethane	4.6	U	4.6	0.54	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
2-Butanone (MEK)	18	U	18	1.2	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Carbon disulfide	4.6	U	4.6	0.19	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Carbon tetrachloride	4.6	U	4.6	0.23	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Chlorobenzene	4.6	U	4.6	0.30	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Chloroethane	4.6	U	4.6	0.35	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Chloroform	4.6	U	4.6	0.21	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Chloromethane	4.6	U	4.6	0.35	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,1-Dichloroethane	4.6	U	4.6	0.30	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,2-Dichloroethane	4.6	U	4.6	0.27	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,1-Dichloroethene	0.77	J	4.6	0.50	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,2-Dichloropropane	4.6	U	4.6	0.29	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
cis-1,3-Dichloropropene	4.6	U	4.6	0.24	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
trans-1,3-Dichloropropene	4.6	U	4.6	0.19	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Ethylbenzene	4.6	U	4.6	0.25	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
2-Hexanone	18	U	18	0.53	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Methylene Chloride	3.3	J B	4.6	0.22	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
4-Methyl-2-pentanone (MIBK)	18	U	18	0.82	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Styrene	4.6	U	4.6	0.25	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,1,2,2-Tetrachloroethane	4.6	U	4.6	0.24	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Tetrachloroethene	4.6	U	4.6	0.34	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Toluene	0.55	J	4.6	0.31	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Trichloroethene	0.57	J	4.6	0.38	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Vinyl chloride	6.8		4.6	0.26	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Xylenes, Total	0.50	J	9.2	0.37	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,1,1-Trichloroethane	4.6	U	4.6	0.21	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,1,2-Trichloroethane	4.6	U	4.6	0.36	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Cyclohexane	0.88	J *	9.2	0.19	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,2-Dibromo-3-Chloropropane	9.2	U	9.2	0.63	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Ethylene Dibromide	4.6	U	4.6	0.32	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Dichlorodifluoromethane	4.6	U *	4.6	0.32	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
cis-1,2-Dichloroethene	67		4.6	0.26	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
trans-1,2-Dichloroethene	23		4.6	0.35	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Isopropylbenzene	0.21	J	4.6	0.18	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Methyl acetate	23	U	23	1.1	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Methyl tert-butyl ether	4.6	U	4.6	0.25	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.6	U	4.6	0.45	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,2,4-Trichlorobenzene	4.6	U	4.6	0.22	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,2-Dichlorobenzene	4.6	U	4.6	0.20	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,3-Dichlorobenzene	4.6	U	4.6	0.27	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
1,4-Dichlorobenzene	4.6	U	4.6	0.32	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Trichlorofluoromethane	4.6	U	4.6	0.22	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Chlorodibromomethane	4.6	U	4.6	0.28	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Methylcyclohexane	2.2	J *	9.2	0.21	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1
Naphthalene	4.6	U	4.6	0.30	ug/Kg	☼	07/29/17 13:08	08/01/17 17:03	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: S-170728-RA-13

Lab Sample ID: 240-83023-4

Date Collected: 07/28/17 09:15

Matrix: Solid

Date Received: 07/29/17 09:20

Percent Solids: 83.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	75		61 - 127	07/29/17 13:08	08/01/17 17:03	1
4-Bromofluorobenzene (Surr)	106		61 - 132	07/29/17 13:08	08/01/17 17:03	1
Toluene-d8 (Surr)	81		66 - 125	07/29/17 13:08	08/01/17 17:03	1
Dibromofluoromethane (Surr)	74		43 - 131	07/29/17 13:08	08/01/17 17:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.0		0.1	0.1	%			07/31/17 08:46	1
Percent Moisture	17.0		0.1	0.1	%			07/31/17 08:46	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83023-5

Date Collected: 07/27/17 00:00

Matrix: Water

Date Received: 07/29/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/09/17 13:16	1
Benzene	1.0	U	1.0	0.28	ug/L			08/09/17 13:16	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/09/17 13:16	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/09/17 13:16	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/09/17 13:16	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/09/17 13:16	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/09/17 13:16	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/09/17 13:16	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/09/17 13:16	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/09/17 13:16	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/09/17 13:16	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/09/17 13:16	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/09/17 13:16	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/09/17 13:16	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/09/17 13:16	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/09/17 13:16	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/09/17 13:16	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/09/17 13:16	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/09/17 13:16	1
2-Hexanone	10	U	10	1.2	ug/L			08/09/17 13:16	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/09/17 13:16	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/09/17 13:16	1
Styrene	1.0	U	1.0	0.23	ug/L			08/09/17 13:16	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/09/17 13:16	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/09/17 13:16	1
Toluene	1.0	U	1.0	0.23	ug/L			08/09/17 13:16	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/09/17 13:16	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/09/17 13:16	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/09/17 13:16	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/09/17 13:16	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/09/17 13:16	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/09/17 13:16	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/09/17 13:16	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/09/17 13:16	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/09/17 13:16	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/09/17 13:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/09/17 13:16	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/09/17 13:16	1
Methyl acetate	10	U	10	1.4	ug/L			08/09/17 13:16	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/09/17 13:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/09/17 13:16	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/09/17 13:16	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/09/17 13:16	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/09/17 13:16	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/09/17 13:16	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/09/17 13:16	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/09/17 13:16	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/09/17 13:16	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/09/17 13:16	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83023-5

Date Collected: 07/27/17 00:00

Matrix: Water

Date Received: 07/29/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	93		61 - 138		08/09/17 13:16	1
4-Bromofluorobenzene (Surr)	96		69 - 120		08/09/17 13:16	1
Toluene-d8 (Surr)	94		73 - 120		08/09/17 13:16	1
Dibromofluoromethane (Surr)	95		69 - 124		08/09/17 13:16	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (61-127)	BFB (61-132)	TOL (66-125)	DBFM (43-131)
240-83023-4	S-170728-RA-13	75	106	81	74
LCS 240-289521/5	Lab Control Sample	76	90	77	80
MB 240-289521/6	Method Blank	82	88	76	77

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (61-138)	BFB (69-120)	TOL (73-120)	DBFM (69-124)
240-83023-1	W-170727-RA-33	80	92	90	81
240-83023-2	W-170727-RA-38	79	91	91	81
240-83023-3	W-170727-RA-43	84	93	90	83
240-83023-5	TRIP BLANK	93	96	94	95
LCS 240-289642/4	Lab Control Sample	81	93	92	85
LCS 240-290479/5	Lab Control Sample	86	100	96	95
MB 240-289642/6	Method Blank	84	91	90	81
MB 240-290479/7	Method Blank	87	95	93	92

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-289521/6

Matrix: Solid

Analysis Batch: 289521

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20	U	20	3.1	ug/Kg			08/01/17 14:54	1
Benzene	5.0	U	5.0	0.32	ug/Kg			08/01/17 14:54	1
Dichlorobromomethane	5.0	U	5.0	0.33	ug/Kg			08/01/17 14:54	1
Bromoform	5.0	U	5.0	0.40	ug/Kg			08/01/17 14:54	1
Bromomethane	5.0	U	5.0	0.59	ug/Kg			08/01/17 14:54	1
2-Butanone (MEK)	20	U	20	1.3	ug/Kg			08/01/17 14:54	1
Carbon disulfide	5.0	U	5.0	0.21	ug/Kg			08/01/17 14:54	1
Carbon tetrachloride	5.0	U	5.0	0.25	ug/Kg			08/01/17 14:54	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			08/01/17 14:54	1
Chloroethane	5.0	U	5.0	0.38	ug/Kg			08/01/17 14:54	1
Chloroform	5.0	U	5.0	0.23	ug/Kg			08/01/17 14:54	1
Chloromethane	5.0	U	5.0	0.38	ug/Kg			08/01/17 14:54	1
1,1-Dichloroethane	5.0	U	5.0	0.33	ug/Kg			08/01/17 14:54	1
1,2-Dichloroethane	5.0	U	5.0	0.29	ug/Kg			08/01/17 14:54	1
1,1-Dichloroethene	5.0	U	5.0	0.54	ug/Kg			08/01/17 14:54	1
1,2-Dichloropropane	5.0	U	5.0	0.31	ug/Kg			08/01/17 14:54	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.26	ug/Kg			08/01/17 14:54	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.21	ug/Kg			08/01/17 14:54	1
Ethylbenzene	5.0	U	5.0	0.27	ug/Kg			08/01/17 14:54	1
2-Hexanone	20	U	20	0.58	ug/Kg			08/01/17 14:54	1
Methylene Chloride	2.25	J	5.0	0.24	ug/Kg			08/01/17 14:54	1
4-Methyl-2-pentanone (MIBK)	20	U	20	0.89	ug/Kg			08/01/17 14:54	1
Styrene	5.0	U	5.0	0.27	ug/Kg			08/01/17 14:54	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.26	ug/Kg			08/01/17 14:54	1
Tetrachloroethene	5.0	U	5.0	0.37	ug/Kg			08/01/17 14:54	1
Toluene	5.0	U	5.0	0.34	ug/Kg			08/01/17 14:54	1
Trichloroethene	5.0	U	5.0	0.41	ug/Kg			08/01/17 14:54	1
Vinyl chloride	5.0	U	5.0	0.28	ug/Kg			08/01/17 14:54	1
Xylenes, Total	10	U	10	0.40	ug/Kg			08/01/17 14:54	1
1,1,1-Trichloroethane	5.0	U	5.0	0.23	ug/Kg			08/01/17 14:54	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			08/01/17 14:54	1
Cyclohexane	10	U	10	0.21	ug/Kg			08/01/17 14:54	1
1,2-Dibromo-3-Chloropropane	10	U	10	0.68	ug/Kg			08/01/17 14:54	1
Ethylene Dibromide	5.0	U	5.0	0.35	ug/Kg			08/01/17 14:54	1
Dichlorodifluoromethane	5.0	U	5.0	0.35	ug/Kg			08/01/17 14:54	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.28	ug/Kg			08/01/17 14:54	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.38	ug/Kg			08/01/17 14:54	1
Isopropylbenzene	5.0	U	5.0	0.20	ug/Kg			08/01/17 14:54	1
Methyl acetate	25	U	25	1.2	ug/Kg			08/01/17 14:54	1
Methyl tert-butyl ether	5.0	U	5.0	0.27	ug/Kg			08/01/17 14:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	0.49	ug/Kg			08/01/17 14:54	1
1,2,4-Trichlorobenzene	5.0	U	5.0	0.24	ug/Kg			08/01/17 14:54	1
1,2-Dichlorobenzene	5.0	U	5.0	0.22	ug/Kg			08/01/17 14:54	1
1,3-Dichlorobenzene	5.0	U	5.0	0.29	ug/Kg			08/01/17 14:54	1
1,4-Dichlorobenzene	5.0	U	5.0	0.35	ug/Kg			08/01/17 14:54	1
Trichlorofluoromethane	5.0	U	5.0	0.24	ug/Kg			08/01/17 14:54	1
Chlorodibromomethane	5.0	U	5.0	0.30	ug/Kg			08/01/17 14:54	1
Methylcyclohexane	10	U	10	0.23	ug/Kg			08/01/17 14:54	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-289521/6
Matrix: Solid
Analysis Batch: 289521

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	5.0	U	5.0	0.33	ug/Kg			08/01/17 14:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		61 - 127		08/01/17 14:54	1
4-Bromofluorobenzene (Surr)	88		61 - 132		08/01/17 14:54	1
Toluene-d8 (Surr)	76		66 - 125		08/01/17 14:54	1
Dibromofluoromethane (Surr)	77		43 - 131		08/01/17 14:54	1

Lab Sample ID: LCS 240-289521/5
Matrix: Solid
Analysis Batch: 289521

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	75.1		ug/Kg		75	24 - 125
Benzene	50.0	54.1		ug/Kg		108	77 - 120
Dichlorobromomethane	50.0	54.6		ug/Kg		109	61 - 132
Bromoform	50.0	42.1		ug/Kg		84	40 - 140
Bromomethane	20.0	20.7		ug/Kg		104	10 - 153
2-Butanone (MEK)	100	77.4		ug/Kg		77	51 - 120
Carbon disulfide	50.0	51.6		ug/Kg		103	17 - 163
Carbon tetrachloride	50.0	57.5		ug/Kg		115	43 - 144
Chlorobenzene	50.0	51.4		ug/Kg		103	76 - 120
Chloroethane	20.0	18.6		ug/Kg		93	10 - 166
Chloroform	50.0	52.2		ug/Kg		104	74 - 120
Chloromethane	20.0	22.7		ug/Kg		114	41 - 124
1,1-Dichloroethane	50.0	57.2		ug/Kg		114	72 - 120
1,2-Dichloroethane	50.0	47.4		ug/Kg		95	71 - 120
1,1-Dichloroethene	50.0	43.4		ug/Kg		87	58 - 130
1,2-Dichloropropane	50.0	59.3		ug/Kg		119	78 - 122
cis-1,3-Dichloropropene	50.0	58.7		ug/Kg		117	66 - 126
trans-1,3-Dichloropropene	50.0	44.1		ug/Kg		88	55 - 121
Ethylbenzene	50.0	55.3		ug/Kg		111	76 - 120
2-Hexanone	100	93.2		ug/Kg		93	52 - 129
Methylene Chloride	50.0	57.3		ug/Kg		115	64 - 126
4-Methyl-2-pentanone (MIBK)	100	88.8		ug/Kg		89	65 - 131
Styrene	50.0	52.1		ug/Kg		104	80 - 120
1,1,2,2-Tetrachloroethane	50.0	58.7		ug/Kg		117	78 - 120
Tetrachloroethene	50.0	52.9		ug/Kg		106	68 - 122
Toluene	50.0	51.3		ug/Kg		103	74 - 120
Trichloroethene	50.0	45.7		ug/Kg		91	73 - 123
Vinyl chloride	20.0	21.6		ug/Kg		108	49 - 131
Xylenes, Total	100	113		ug/Kg		113	78 - 120
1,1,1-Trichloroethane	50.0	59.7		ug/Kg		119	60 - 136
1,1,2-Trichloroethane	50.0	47.9		ug/Kg		96	80 - 120
Cyclohexane	50.0	67.8	*	ug/Kg		136	66 - 129
1,2-Dibromo-3-Chloropropane	50.0	46.2		ug/Kg		92	40 - 133
Ethylene Dibromide	50.0	47.8		ug/Kg		96	80 - 120
Dichlorodifluoromethane	20.0	26.3	*	ug/Kg		132	15 - 127

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-289521/5
Matrix: Solid
Analysis Batch: 289521

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	52.9		ug/Kg		106	78 - 120
trans-1,2-Dichloroethene	50.0	57.0		ug/Kg		114	74 - 124
Isopropylbenzene	50.0	59.3		ug/Kg		119	76 - 124
Methyl acetate	100	103		ug/Kg		103	63 - 126
Methyl tert-butyl ether	50.0	52.8		ug/Kg		106	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	44.7		ug/Kg		89	64 - 125
1,2,4-Trichlorobenzene	50.0	48.5		ug/Kg		97	60 - 124
1,2-Dichlorobenzene	50.0	49.6		ug/Kg		99	75 - 120
1,3-Dichlorobenzene	50.0	52.0		ug/Kg		104	72 - 120
1,4-Dichlorobenzene	50.0	49.3		ug/Kg		99	71 - 120
Trichlorofluoromethane	20.0	18.8		ug/Kg		94	28 - 152
Chlorodibromomethane	50.0	42.1		ug/Kg		84	46 - 125
Methylcyclohexane	50.0	64.5	*	ug/Kg		129	71 - 126
m-Xylene & p-Xylene	50.0	56.9		ug/Kg		114	78 - 120
o-Xylene	50.0	55.8		ug/Kg		112	77 - 120
Naphthalene	50.0	44.7		ug/Kg		89	68 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	76		61 - 127
4-Bromofluorobenzene (Surr)	90		61 - 132
Toluene-d8 (Surr)	77		66 - 125
Dibromofluoromethane (Surr)	80		43 - 131

Lab Sample ID: MB 240-289642/6
Matrix: Water
Analysis Batch: 289642

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/02/17 12:01	1
Benzene	1.0	U	1.0	0.28	ug/L			08/02/17 12:01	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/02/17 12:01	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/02/17 12:01	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/02/17 12:01	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/02/17 12:01	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/02/17 12:01	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/02/17 12:01	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/02/17 12:01	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/02/17 12:01	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/02/17 12:01	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/02/17 12:01	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/02/17 12:01	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/02/17 12:01	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/02/17 12:01	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/02/17 12:01	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/02/17 12:01	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/02/17 12:01	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/02/17 12:01	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-289642/6
Matrix: Water
Analysis Batch: 289642

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Hexanone	10	U	10	1.2	ug/L			08/02/17 12:01	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/02/17 12:01	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/02/17 12:01	1
Styrene	1.0	U	1.0	0.23	ug/L			08/02/17 12:01	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/02/17 12:01	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/02/17 12:01	1
Toluene	1.0	U	1.0	0.23	ug/L			08/02/17 12:01	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/02/17 12:01	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/02/17 12:01	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/02/17 12:01	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/02/17 12:01	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/02/17 12:01	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/02/17 12:01	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/02/17 12:01	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/02/17 12:01	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/02/17 12:01	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/02/17 12:01	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/02/17 12:01	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/02/17 12:01	1
Methyl acetate	10	U	10	1.4	ug/L			08/02/17 12:01	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/02/17 12:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/02/17 12:01	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/02/17 12:01	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/02/17 12:01	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/02/17 12:01	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/02/17 12:01	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/02/17 12:01	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/02/17 12:01	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/02/17 12:01	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/02/17 12:01	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	84		61 - 138		08/02/17 12:01	1
4-Bromofluorobenzene (Surr)	91		69 - 120		08/02/17 12:01	1
Toluene-d8 (Surr)	90		73 - 120		08/02/17 12:01	1
Dibromofluoromethane (Surr)	81		69 - 124		08/02/17 12:01	1

Lab Sample ID: LCS 240-289642/4
Matrix: Water
Analysis Batch: 289642

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Acetone	20.0	13.5		ug/L		68	35 - 131
Benzene	10.0	8.78		ug/L		88	79 - 120
Dichlorobromomethane	10.0	8.91		ug/L		89	79 - 125
Bromoform	10.0	7.79		ug/L		78	55 - 145
Bromomethane	10.0	10.6		ug/L		106	17 - 158
2-Butanone (MEK)	20.0	15.7		ug/L		78	43 - 149

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-289642/4

Matrix: Water

Analysis Batch: 289642

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	10.0	9.07		ug/L		91	49 - 141
Carbon tetrachloride	10.0	9.01		ug/L		90	55 - 171
Chlorobenzene	10.0	9.80		ug/L		98	80 - 120
Chloroethane	10.0	9.94		ug/L		99	10 - 149
Chloroform	10.0	8.93		ug/L		89	80 - 120
Chloromethane	10.0	8.57		ug/L		86	59 - 124
1,1-Dichloroethane	10.0	8.94		ug/L		89	74 - 120
1,2-Dichloroethane	10.0	8.85		ug/L		88	68 - 133
1,1-Dichloroethene	10.0	10.3		ug/L		103	65 - 127
1,2-Dichloropropane	10.0	9.40		ug/L		94	78 - 127
cis-1,3-Dichloropropene	10.0	9.07		ug/L		91	75 - 120
trans-1,3-Dichloropropene	10.0	9.08		ug/L		91	67 - 120
Ethylbenzene	10.0	9.64		ug/L		96	80 - 120
2-Hexanone	20.0	16.8		ug/L		84	28 - 169
Methylene Chloride	10.0	8.47		ug/L		85	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	15.8		ug/L		79	53 - 144
Styrene	10.0	9.44		ug/L		94	80 - 121
1,1,2,2-Tetrachloroethane	10.0	9.77		ug/L		98	58 - 122
Tetrachloroethene	10.0	9.90		ug/L		99	80 - 122
Toluene	10.0	9.73		ug/L		97	78 - 120
Trichloroethene	10.0	9.21		ug/L		92	76 - 124
Vinyl chloride	10.0	9.02		ug/L		90	65 - 124
Xylenes, Total	20.0	19.0		ug/L		95	80 - 120
1,1,1-Trichloroethane	10.0	8.80		ug/L		88	64 - 147
1,1,2-Trichloroethane	10.0	10.0		ug/L		100	76 - 121
Cyclohexane	10.0	8.95		ug/L		89	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	7.58		ug/L		76	50 - 130
Ethylene Dibromide	10.0	9.68		ug/L		97	80 - 120
Dichlorodifluoromethane	10.0	7.12		ug/L		71	42 - 141
cis-1,2-Dichloroethene	10.0	9.04		ug/L		90	77 - 120
trans-1,2-Dichloroethene	10.0	9.33		ug/L		93	74 - 124
Isopropylbenzene	10.0	9.28		ug/L		93	80 - 128
Methyl acetate	20.0	16.1		ug/L		81	63 - 137
Methyl tert-butyl ether	10.0	8.33		ug/L		83	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.2		ug/L		112	65 - 144
1,2,4-Trichlorobenzene	10.0	7.96		ug/L		80	34 - 141
1,2-Dichlorobenzene	10.0	9.78		ug/L		98	80 - 120
1,3-Dichlorobenzene	10.0	9.91		ug/L		99	80 - 120
1,4-Dichlorobenzene	10.0	9.76		ug/L		98	80 - 120
Trichlorofluoromethane	10.0	11.0		ug/L		110	27 - 176
Chlorodibromomethane	10.0	9.36		ug/L		94	64 - 129
Methylcyclohexane	10.0	8.72		ug/L		87	63 - 141
m-Xylene & p-Xylene	10.0	9.46		ug/L		95	80 - 120
o-Xylene	10.0	9.50		ug/L		95	80 - 120
Naphthalene	10.0	7.01		ug/L		70	31 - 127

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-289642/4
Matrix: Water
Analysis Batch: 289642

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	81		61 - 138
4-Bromofluorobenzene (Surr)	93		69 - 120
Toluene-d8 (Surr)	92		73 - 120
Dibromofluoromethane (Surr)	85		69 - 124

Lab Sample ID: MB 240-290479/7
Matrix: Water
Analysis Batch: 290479

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/09/17 12:43	1
Benzene	1.0	U	1.0	0.28	ug/L			08/09/17 12:43	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/09/17 12:43	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/09/17 12:43	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/09/17 12:43	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/09/17 12:43	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/09/17 12:43	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/09/17 12:43	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/09/17 12:43	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/09/17 12:43	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/09/17 12:43	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/09/17 12:43	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/09/17 12:43	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/09/17 12:43	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/09/17 12:43	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/09/17 12:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/09/17 12:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/09/17 12:43	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/09/17 12:43	1
2-Hexanone	10	U	10	1.2	ug/L			08/09/17 12:43	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/09/17 12:43	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/09/17 12:43	1
Styrene	1.0	U	1.0	0.23	ug/L			08/09/17 12:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/09/17 12:43	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/09/17 12:43	1
Toluene	1.0	U	1.0	0.23	ug/L			08/09/17 12:43	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/09/17 12:43	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/09/17 12:43	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/09/17 12:43	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/09/17 12:43	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/09/17 12:43	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/09/17 12:43	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/09/17 12:43	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/09/17 12:43	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/09/17 12:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/09/17 12:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/09/17 12:43	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/09/17 12:43	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-290479/7

Matrix: Water

Analysis Batch: 290479

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	10	U	10	1.4	ug/L			08/09/17 12:43	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/09/17 12:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/09/17 12:43	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/09/17 12:43	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/09/17 12:43	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/09/17 12:43	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/09/17 12:43	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/09/17 12:43	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/09/17 12:43	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/09/17 12:43	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/09/17 12:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		61 - 138		08/09/17 12:43	1
4-Bromofluorobenzene (Surr)	95		69 - 120		08/09/17 12:43	1
Toluene-d8 (Surr)	93		73 - 120		08/09/17 12:43	1
Dibromofluoromethane (Surr)	92		69 - 124		08/09/17 12:43	1

Lab Sample ID: LCS 240-290479/5

Matrix: Water

Analysis Batch: 290479

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	40.0	35.2		ug/L		88	35 - 131
Benzene	20.0	19.8		ug/L		99	79 - 120
Dichlorobromomethane	20.0	20.1		ug/L		100	79 - 125
Bromoform	20.0	18.2		ug/L		91	55 - 145
Bromomethane	20.0	16.2		ug/L		81	17 - 158
2-Butanone (MEK)	40.0	33.0		ug/L		83	43 - 149
Carbon disulfide	20.0	18.9		ug/L		94	49 - 141
Carbon tetrachloride	20.0	20.2		ug/L		101	55 - 171
Chlorobenzene	20.0	20.1		ug/L		101	80 - 120
Chloroethane	20.0	16.9		ug/L		84	10 - 149
Chloroform	20.0	20.4		ug/L		102	80 - 120
Chloromethane	20.0	15.4		ug/L		77	59 - 124
1,1-Dichloroethane	20.0	19.2		ug/L		96	74 - 120
1,2-Dichloroethane	20.0	20.4		ug/L		102	68 - 133
1,1-Dichloroethene	20.0	19.8		ug/L		99	65 - 127
1,2-Dichloropropane	20.0	20.3		ug/L		101	78 - 127
cis-1,3-Dichloropropene	20.0	20.3		ug/L		102	75 - 120
trans-1,3-Dichloropropene	20.0	18.7		ug/L		94	67 - 120
Ethylbenzene	20.0	20.4		ug/L		102	80 - 120
2-Hexanone	40.0	36.4		ug/L		91	28 - 169
Methylene Chloride	20.0	20.1		ug/L		101	64 - 140
4-Methyl-2-pentanone (MIBK)	40.0	36.9		ug/L		92	53 - 144
Styrene	20.0	20.8		ug/L		104	80 - 121
1,1,2,2-Tetrachloroethane	20.0	19.1		ug/L		95	58 - 122
Tetrachloroethene	20.0	20.9		ug/L		104	80 - 122

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290479/5

Matrix: Water

Analysis Batch: 290479

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	20.0	20.4		ug/L		102	78 - 120
Trichloroethene	20.0	21.1		ug/L		105	76 - 124
Vinyl chloride	20.0	15.7		ug/L		79	65 - 124
Xylenes, Total	40.0	40.6		ug/L		102	80 - 120
1,1,1-Trichloroethane	20.0	20.3		ug/L		102	64 - 147
1,1,2-Trichloroethane	20.0	20.8		ug/L		104	76 - 121
Cyclohexane	20.0	19.0		ug/L		95	66 - 135
1,2-Dibromo-3-Chloropropane	20.0	18.9		ug/L		94	50 - 130
Ethylene Dibromide	20.0	19.7		ug/L		99	80 - 120
Dichlorodifluoromethane	20.0	15.5		ug/L		78	42 - 141
cis-1,2-Dichloroethene	20.0	20.7		ug/L		103	77 - 120
trans-1,2-Dichloroethene	20.0	20.9		ug/L		105	74 - 124
Isopropylbenzene	20.0	20.6		ug/L		103	80 - 128
Methyl acetate	40.0	34.1		ug/L		85	63 - 137
Methyl tert-butyl ether	20.0	19.3		ug/L		97	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	19.8		ug/L		99	65 - 144
1,2,4-Trichlorobenzene	20.0	20.1		ug/L		100	34 - 141
1,2-Dichlorobenzene	20.0	20.3		ug/L		102	80 - 120
1,3-Dichlorobenzene	20.0	19.9		ug/L		99	80 - 120
1,4-Dichlorobenzene	20.0	19.9		ug/L		99	80 - 120
Trichlorofluoromethane	20.0	19.0		ug/L		95	27 - 176
Chlorodibromomethane	20.0	19.9		ug/L		100	64 - 129
Methylcyclohexane	20.0	18.8		ug/L		94	63 - 141
m-Xylene & p-Xylene	20.0	20.2		ug/L		101	80 - 120
o-Xylene	20.0	20.4		ug/L		102	80 - 120
Naphthalene	20.0	19.2		ug/L		96	31 - 127

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	86		61 - 138
4-Bromofluorobenzene (Surr)	100		69 - 120
Toluene-d8 (Surr)	96		73 - 120
Dibromofluoromethane (Surr)	95		69 - 124

QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

GC/MS VOA

Prep Batch: 289355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83023-4	S-170728-RA-13	Total/NA	Solid	5035	

Analysis Batch: 289521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83023-4	S-170728-RA-13	Total/NA	Solid	8260B	289355
MB 240-289521/6	Method Blank	Total/NA	Solid	8260B	
LCS 240-289521/5	Lab Control Sample	Total/NA	Solid	8260B	

Analysis Batch: 289642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83023-1	W-170727-RA-33	Total/NA	Water	8260B	
240-83023-2	W-170727-RA-38	Total/NA	Water	8260B	
240-83023-3	W-170727-RA-43	Total/NA	Water	8260B	
MB 240-289642/6	Method Blank	Total/NA	Water	8260B	
LCS 240-289642/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 290479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83023-5	TRIP BLANK	Total/NA	Water	8260B	
MB 240-290479/7	Method Blank	Total/NA	Water	8260B	
LCS 240-290479/5	Lab Control Sample	Total/NA	Water	8260B	

General Chemistry

Analysis Batch: 289283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83023-4	S-170728-RA-13	Total/NA	Solid	Moisture	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Client Sample ID: W-170727-RA-33

Date Collected: 07/27/17 15:50

Date Received: 07/29/17 09:20

Lab Sample ID: 240-83023-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	289642	08/02/17 14:16	LEE	TAL CAN

Client Sample ID: W-170727-RA-38

Date Collected: 07/27/17 14:05

Date Received: 07/29/17 09:20

Lab Sample ID: 240-83023-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	289642	08/02/17 14:38	LEE	TAL CAN

Client Sample ID: W-170727-RA-43

Date Collected: 07/27/17 13:35

Date Received: 07/29/17 09:20

Lab Sample ID: 240-83023-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	289642	08/02/17 15:00	LEE	TAL CAN

Client Sample ID: S-170728-RA-13

Date Collected: 07/28/17 09:15

Date Received: 07/29/17 09:20

Lab Sample ID: 240-83023-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	289283	07/31/17 08:46	PW	TAL CAN

Client Sample ID: S-170728-RA-13

Date Collected: 07/28/17 09:15

Date Received: 07/29/17 09:20

Lab Sample ID: 240-83023-4

Matrix: Solid

Percent Solids: 83.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			289355	07/29/17 13:08	LAM	TAL CAN
Total/NA	Analysis	8260B		1	289521	08/01/17 17:03	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Date Collected: 07/27/17 00:00

Date Received: 07/29/17 09:20

Lab Sample ID: 240-83023-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	290479	08/09/17 13:16	HMB	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TestAmerica Canton

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83023-1

Laboratory: TestAmerica Canton

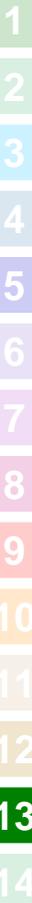
Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Minnesota	NELAP	5	039-999-348	12-31-17 *

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

* Accreditation/Certification renewal pending - accreditation/certification considered valid.





GTH Services Inc.
CONESTOGA-ROVERS
 & ASSOCIATES

1.4/C1.4
CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
 St. Paul, Minnesota 55112 United States

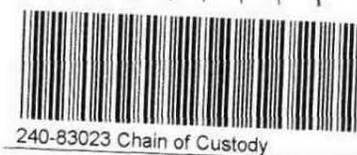
Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: **SP-02433**

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 88751			Laboratory Name: West America				Lab Location: N. Canton, OH				SSOW ID:																																																																																																					
Project Name: 6714 Walker St.			Lab Contact:				Lab Quote No:				Cooler No:																																																																																																					
Project Location: St. Louis Park MN			CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)				Carrier: Fedex																																																																																																					
Chemistry Contact: Grant Anderson			<table border="1"> <thead> <tr> <th>SAMPLE TYPE</th> <th>Matrix Code (see back of COC)</th> <th>Grab (G) or Comp (C)</th> <th>Unpreserved</th> <th>Hydrochloric Acid (HCl)</th> <th>Nitric Acid (HNO₃)</th> <th>Sulfuric Acid (H₂SO₄)</th> <th>Sodium Hydroxide (NaOH)</th> <th>Methanol/Water (Soil VOC)</th> <th>EnCores 3x5-g, 1x25-g</th> <th>Other:</th> <th>Total Containers/Sample</th> <th>MS/MSD Request</th> </tr> </thead> <tbody> <tr> <td></td> <td>Vocs</td> <td></td> </tr> </tbody> </table>				SAMPLE TYPE	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	MS/MSD Request												Vocs		Airbill No:																																																																															
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Sampler(s): M. Barnes / R. Amot											Date Shipped: 7/28/17																																																																																																					
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TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input checked="" type="checkbox"/> 2 Week <input type="checkbox"/> Other:			Total Number of Containers: 14				Notes/ Special Requirements:				All Samples in Cooler must be on COC																																																																																																					
RELINQUISHED BY: [Signature]			COMPANY: GTH		DATE: 7/28/17		TIME: 16:00		RECEIVED BY: [Signature]			COMPANY: TA		DATE: 7/29/17		TIME: 9:30																																																																																																



THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY



TestAmerica Canton Sample Receipt Form/Narrative Login # : 83023

Canton Facility

Client GHD Site Name _____ Cooler unpacked by: [Signature]

Cooler Received on 7/29/17 Opened on 7/29/17

FedEx: 1st Grd UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0°C) Observed Cooler Temp. 1.4 °C Corrected Cooler Temp. 1.4 °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels be reconciled with the COC? Yes No

9. Were correct bottle(s) used for the test(s) indicated? Yes No

10. Sufficient quantity received to perform indicated analyses? Yes No

11. Are these work share samples? Yes No

If yes, Questions 11-15 have been checked at the originating laboratory.

11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC697954

12. Were VOAs on the COC? Yes No

13. Were air bubbles >6 mm in any VOA vials? Yes No NA  Larger than this.

14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B702401VB Yes No

15. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: _____

17. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-83244-1

Client Project/Site: 88751, Hinshaw & Culbertson

For:

GHD Services Inc.

1801 Old Highway 8 NW

Suite 114

St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson



Authorized for release by:

8/15/2017 2:29:31 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Job ID: 240-83244-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-83244-1

Comments

No additional comments.

Receipt

The samples were received on 8/4/2017 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for preparation batch 240-290052 and analytical batch 240-290464 recovered outside control limits for the following analytes: 1,1,2,2-Tetrachloroethane. This analytes was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-290052 and analytical batch 240-290464.

Method(s) 8260B: A MS/MSD was prepared for batch 240-290053, but was analyzed in a different analytical batch.

Method(s) 8260B: The pH of the sample(s) was greater than 2. The samples were analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably, Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2: W-170801-RA-44 (240-83244-1), W-170801-RA-45 (240-83244-2), W-170801-RA-45 (240-83244-2[MS]) and W-170801-RA-45 (240-83244-2[MSD]), W-170801-RA-47 (240-83244-4) and W-170801-RA-49 (240-83244-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

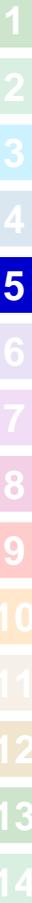
Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-83244-1	W-170801-RA-44	Water	08/01/17 09:53	08/04/17 09:20
240-83244-2	W-170801-RA-45	Water	08/01/17 10:35	08/04/17 09:20
240-83244-3	W-170801-RA-46	Water	08/01/17 11:40	08/04/17 09:20
240-83244-4	W-170801-RA-47	Water	08/01/17 13:20	08/04/17 09:20
240-83244-5	W-170801-RA-48	Water	08/01/17 14:25	08/04/17 09:20
240-83244-6	W-170801-RA-49	Water	08/01/17 16:40	08/04/17 09:20
240-83244-7	TRIP BLANK	Water	08/01/17 00:00	08/04/17 09:20
240-83244-8	S-170802-RA-14	Solid	08/02/17 11:55	08/04/17 09:20
240-83244-9	S-170802-RA-15	Solid	08/02/17 12:02	08/04/17 09:20
240-83244-10	S-170802-RA-16	Solid	08/02/17 12:25	08/04/17 09:20
240-83244-11	S-170802-RA-17	Solid	08/02/17 12:45	08/04/17 09:20
240-83244-12	S-170802-RA-18	Solid	08/02/17 14:30	08/04/17 09:20

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-44

Lab Sample ID: 240-83244-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	5.8		1.0	0.30	ug/L	1		8260B	Total/NA
Trichloroethene	9.0		1.0	0.33	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	1.2		1.0	0.30	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	2.1		1.0	0.29	ug/L	1		8260B	Total/NA

Client Sample ID: W-170801-RA-45

Lab Sample ID: 240-83244-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	11		1.0	0.30	ug/L	1		8260B	Total/NA
Toluene	0.25	J	1.0	0.23	ug/L	1		8260B	Total/NA
Trichloroethene	20		1.0	0.33	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	19	F1	1.0	0.30	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	33		1.0	0.29	ug/L	1		8260B	Total/NA

Client Sample ID: W-170801-RA-46

Lab Sample ID: 240-83244-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2500		100	30	ug/L	100		8260B	Total/NA
Trichloroethene	95	J	100	33	ug/L	100		8260B	Total/NA
cis-1,2-Dichloroethene	100		100	30	ug/L	100		8260B	Total/NA
trans-1,2-Dichloroethene	77	J	100	29	ug/L	100		8260B	Total/NA

Client Sample ID: W-170801-RA-47

Lab Sample ID: 240-83244-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	15		13	3.7	ug/L	13.33		8260B	Total/NA
Tetrachloroethene	9.2	J	13	4.0	ug/L	13.33		8260B	Total/NA
Vinyl chloride	70		13	6.0	ug/L	13.33		8260B	Total/NA
cis-1,2-Dichloroethene	430		13	4.0	ug/L	13.33		8260B	Total/NA
trans-1,2-Dichloroethene	86		13	3.9	ug/L	13.33		8260B	Total/NA

Client Sample ID: W-170801-RA-48

Lab Sample ID: 240-83244-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	5400		250	75	ug/L	250		8260B	Total/NA

Client Sample ID: W-170801-RA-49

Lab Sample ID: 240-83244-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	47	J	50	14	ug/L	50		8260B	Total/NA
Tetrachloroethene	61		50	15	ug/L	50		8260B	Total/NA
Vinyl chloride	170		50	23	ug/L	50		8260B	Total/NA
cis-1,2-Dichloroethene	1000		50	15	ug/L	50		8260B	Total/NA
trans-1,2-Dichloroethene	54		50	15	ug/L	50		8260B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83244-7

No Detections.

Client Sample ID: S-170802-RA-14

Lab Sample ID: 240-83244-8

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-14 (Continued)

Lab Sample ID: 240-83244-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2100		240	20	ug/Kg	1	☒	8260B	Total/NA

Client Sample ID: S-170802-RA-15

Lab Sample ID: 240-83244-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	2.9	J B	4.6	0.22	ug/Kg	1	☒	8260B	Total/NA
Tetrachloroethene	110		4.6	0.34	ug/Kg	1	☒	8260B	Total/NA
Toluene	0.37	J	4.6	0.32	ug/Kg	1	☒	8260B	Total/NA

Client Sample ID: S-170802-RA-16

Lab Sample ID: 240-83244-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	2.4	J B	4.0	0.19	ug/Kg	1	☒	8260B	Total/NA
Tetrachloroethene	86		4.0	0.30	ug/Kg	1	☒	8260B	Total/NA
Toluene	0.27	J	4.0	0.27	ug/Kg	1	☒	8260B	Total/NA

Client Sample ID: S-170802-RA-17

Lab Sample ID: 240-83244-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	8.9	J	17	2.6	ug/Kg	1	☒	8260B	Total/NA
Methylene Chloride	3.1	J B	4.2	0.20	ug/Kg	1	☒	8260B	Total/NA
Tetrachloroethene	14		4.2	0.31	ug/Kg	1	☒	8260B	Total/NA

Client Sample ID: S-170802-RA-18

Lab Sample ID: 240-83244-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4-Methyl-2-pentanone (MIBK)	49	J	1200	49	ug/Kg	1	☒	8260B	Total/NA
Tetrachloroethene	960		310	26	ug/Kg	1	☒	8260B	Total/NA
Xylenes, Total	260	J	610	34	ug/Kg	1	☒	8260B	Total/NA
cis-1,2-Dichloroethene	140	J	310	43	ug/Kg	1	☒	8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-44

Lab Sample ID: 240-83244-1

Date Collected: 08/01/17 09:53

Matrix: Water

Date Received: 08/04/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/10/17 15:13	1
Benzene	1.0	U	1.0	0.28	ug/L			08/10/17 15:13	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/10/17 15:13	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/10/17 15:13	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/10/17 15:13	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/10/17 15:13	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/10/17 15:13	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/10/17 15:13	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/10/17 15:13	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/10/17 15:13	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/10/17 15:13	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/10/17 15:13	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/10/17 15:13	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/10/17 15:13	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/10/17 15:13	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/10/17 15:13	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/10/17 15:13	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/10/17 15:13	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/10/17 15:13	1
2-Hexanone	10	U	10	1.2	ug/L			08/10/17 15:13	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/10/17 15:13	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/10/17 15:13	1
Styrene	1.0	U	1.0	0.23	ug/L			08/10/17 15:13	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/10/17 15:13	1
Tetrachloroethene	5.8		1.0	0.30	ug/L			08/10/17 15:13	1
Toluene	1.0	U	1.0	0.23	ug/L			08/10/17 15:13	1
Trichloroethene	9.0		1.0	0.33	ug/L			08/10/17 15:13	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/10/17 15:13	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/10/17 15:13	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/10/17 15:13	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/10/17 15:13	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/10/17 15:13	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/10/17 15:13	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/10/17 15:13	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/10/17 15:13	1
cis-1,2-Dichloroethene	1.2		1.0	0.30	ug/L			08/10/17 15:13	1
trans-1,2-Dichloroethene	2.1		1.0	0.29	ug/L			08/10/17 15:13	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/10/17 15:13	1
Methyl acetate	10	U	10	1.4	ug/L			08/10/17 15:13	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/10/17 15:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/10/17 15:13	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/10/17 15:13	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/10/17 15:13	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/10/17 15:13	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/10/17 15:13	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/10/17 15:13	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/10/17 15:13	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/10/17 15:13	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/10/17 15:13	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-44

Lab Sample ID: 240-83244-1

Date Collected: 08/01/17 09:53

Matrix: Water

Date Received: 08/04/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	107		61 - 138		08/10/17 15:13	1
4-Bromofluorobenzene (Surr)	106		69 - 120		08/10/17 15:13	1
Toluene-d8 (Surr)	106		73 - 120		08/10/17 15:13	1
Dibromofluoromethane (Surr)	98		69 - 124		08/10/17 15:13	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-45

Lab Sample ID: 240-83244-2

Date Collected: 08/01/17 10:35

Matrix: Water

Date Received: 08/04/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/10/17 15:35	1
Benzene	1.0	U	1.0	0.28	ug/L			08/10/17 15:35	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/10/17 15:35	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/10/17 15:35	1
Bromomethane	1.0	U F1	1.0	0.42	ug/L			08/10/17 15:35	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/10/17 15:35	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/10/17 15:35	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/10/17 15:35	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/10/17 15:35	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/10/17 15:35	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/10/17 15:35	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/10/17 15:35	1
1,1-Dichloroethane	1.0	U F1	1.0	0.25	ug/L			08/10/17 15:35	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/10/17 15:35	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/10/17 15:35	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/10/17 15:35	1
cis-1,3-Dichloropropene	1.0	U F1	1.0	0.26	ug/L			08/10/17 15:35	1
trans-1,3-Dichloropropene	1.0	U F1	1.0	0.31	ug/L			08/10/17 15:35	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/10/17 15:35	1
2-Hexanone	10	U	10	1.2	ug/L			08/10/17 15:35	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/10/17 15:35	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/10/17 15:35	1
Styrene	1.0	U	1.0	0.23	ug/L			08/10/17 15:35	1
1,1,2,2-Tetrachloroethane	1.0	U F1	1.0	0.32	ug/L			08/10/17 15:35	1
Tetrachloroethene	11		1.0	0.30	ug/L			08/10/17 15:35	1
Toluene	0.25	J	1.0	0.23	ug/L			08/10/17 15:35	1
Trichloroethene	20		1.0	0.33	ug/L			08/10/17 15:35	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/10/17 15:35	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/10/17 15:35	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/10/17 15:35	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/10/17 15:35	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/10/17 15:35	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/10/17 15:35	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/10/17 15:35	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/10/17 15:35	1
cis-1,2-Dichloroethene	19	F1	1.0	0.30	ug/L			08/10/17 15:35	1
trans-1,2-Dichloroethene	33		1.0	0.29	ug/L			08/10/17 15:35	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/10/17 15:35	1
Methyl acetate	10	U	10	1.4	ug/L			08/10/17 15:35	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/10/17 15:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/10/17 15:35	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/10/17 15:35	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/10/17 15:35	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/10/17 15:35	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/10/17 15:35	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/10/17 15:35	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/10/17 15:35	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/10/17 15:35	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/10/17 15:35	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-45

Lab Sample ID: 240-83244-2

Date Collected: 08/01/17 10:35

Matrix: Water

Date Received: 08/04/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	105		61 - 138		08/10/17 15:35	1
4-Bromofluorobenzene (Surr)	105		69 - 120		08/10/17 15:35	1
Toluene-d8 (Surr)	104		73 - 120		08/10/17 15:35	1
Dibromofluoromethane (Surr)	100		69 - 124		08/10/17 15:35	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-46

Lab Sample ID: 240-83244-3

Date Collected: 08/01/17 11:40

Matrix: Water

Date Received: 08/04/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1000	U	1000	180	ug/L			08/11/17 23:01	100
Benzene	100	U	100	28	ug/L			08/11/17 23:01	100
Dichlorobromomethane	100	U	100	30	ug/L			08/11/17 23:01	100
Bromoform	100	U	100	43	ug/L			08/11/17 23:01	100
Bromomethane	100	U	100	42	ug/L			08/11/17 23:01	100
2-Butanone (MEK)	1000	U	1000	100	ug/L			08/11/17 23:01	100
Carbon disulfide	100	U	100	34	ug/L			08/11/17 23:01	100
Carbon tetrachloride	100	U	100	35	ug/L			08/11/17 23:01	100
Chlorobenzene	100	U	100	32	ug/L			08/11/17 23:01	100
Chloroethane	100	U	100	41	ug/L			08/11/17 23:01	100
Chloroform	100	U	100	31	ug/L			08/11/17 23:01	100
Chloromethane	100	U	100	43	ug/L			08/11/17 23:01	100
1,1-Dichloroethane	100	U	100	25	ug/L			08/11/17 23:01	100
1,2-Dichloroethane	100	U	100	30	ug/L			08/11/17 23:01	100
1,1-Dichloroethene	100	U	100	27	ug/L			08/11/17 23:01	100
1,2-Dichloropropane	100	U	100	30	ug/L			08/11/17 23:01	100
cis-1,3-Dichloropropene	100	U	100	26	ug/L			08/11/17 23:01	100
trans-1,3-Dichloropropene	100	U	100	31	ug/L			08/11/17 23:01	100
Ethylbenzene	100	U	100	26	ug/L			08/11/17 23:01	100
2-Hexanone	1000	U	1000	120	ug/L			08/11/17 23:01	100
Methylene Chloride	100	U	100	53	ug/L			08/11/17 23:01	100
4-Methyl-2-pentanone (MIBK)	1000	U	1000	71	ug/L			08/11/17 23:01	100
Styrene	100	U	100	23	ug/L			08/11/17 23:01	100
1,1,2,2-Tetrachloroethane	100	U	100	32	ug/L			08/11/17 23:01	100
Tetrachloroethene	2500		100	30	ug/L			08/11/17 23:01	100
Toluene	100	U	100	23	ug/L			08/11/17 23:01	100
Trichloroethene	95 J		100	33	ug/L			08/11/17 23:01	100
Vinyl chloride	100	U	100	45	ug/L			08/11/17 23:01	100
Xylenes, Total	200	U	200	24	ug/L			08/11/17 23:01	100
1,1,1-Trichloroethane	100	U	100	23	ug/L			08/11/17 23:01	100
1,1,2-Trichloroethane	100	U	100	34	ug/L			08/11/17 23:01	100
Cyclohexane	100	U	100	44	ug/L			08/11/17 23:01	100
1,2-Dibromo-3-Chloropropane	200	U	200	47	ug/L			08/11/17 23:01	100
Ethylene Dibromide	100	U	100	23	ug/L			08/11/17 23:01	100
Dichlorodifluoromethane	100	U	100	50	ug/L			08/11/17 23:01	100
cis-1,2-Dichloroethene	100		100	30	ug/L			08/11/17 23:01	100
trans-1,2-Dichloroethene	77 J		100	29	ug/L			08/11/17 23:01	100
Isopropylbenzene	100	U	100	21	ug/L			08/11/17 23:01	100
Methyl acetate	1000	U	1000	140	ug/L			08/11/17 23:01	100
Methyl tert-butyl ether	100	U	100	27	ug/L			08/11/17 23:01	100
1,1,2-Trichloro-1,2,2-trifluoroethane	100	U	100	41	ug/L			08/11/17 23:01	100
1,2,4-Trichlorobenzene	100	U	100	27	ug/L			08/11/17 23:01	100
1,2-Dichlorobenzene	100	U	100	26	ug/L			08/11/17 23:01	100
1,3-Dichlorobenzene	100	U	100	32	ug/L			08/11/17 23:01	100
1,4-Dichlorobenzene	100	U	100	23	ug/L			08/11/17 23:01	100
Trichlorofluoromethane	100	U	100	50	ug/L			08/11/17 23:01	100
Chlorodibromomethane	100	U	100	25	ug/L			08/11/17 23:01	100
Methylcyclohexane	100	U	100	45	ug/L			08/11/17 23:01	100
Naphthalene	100	U	100	25	ug/L			08/11/17 23:01	100

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-46

Lab Sample ID: 240-83244-3

Date Collected: 08/01/17 11:40

Matrix: Water

Date Received: 08/04/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	108		61 - 138		08/11/17 23:01	100
4-Bromofluorobenzene (Surr)	110		69 - 120		08/11/17 23:01	100
Toluene-d8 (Surr)	107		73 - 120		08/11/17 23:01	100
Dibromofluoromethane (Surr)	99		69 - 124		08/11/17 23:01	100

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-47

Lab Sample ID: 240-83244-4

Date Collected: 08/01/17 13:20

Matrix: Water

Date Received: 08/04/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	130	U	130	23	ug/L			08/11/17 23:23	13.33
Benzene	15		13	3.7	ug/L			08/11/17 23:23	13.33
Dichlorobromomethane	13	U	13	4.0	ug/L			08/11/17 23:23	13.33
Bromoform	13	U	13	5.7	ug/L			08/11/17 23:23	13.33
Bromomethane	13	U F1	13	5.6	ug/L			08/11/17 23:23	13.33
2-Butanone (MEK)	130	U	130	14	ug/L			08/11/17 23:23	13.33
Carbon disulfide	13	U	13	4.5	ug/L			08/11/17 23:23	13.33
Carbon tetrachloride	13	U	13	4.7	ug/L			08/11/17 23:23	13.33
Chlorobenzene	13	U	13	4.3	ug/L			08/11/17 23:23	13.33
Chloroethane	13	U	13	5.5	ug/L			08/11/17 23:23	13.33
Chloroform	13	U	13	4.1	ug/L			08/11/17 23:23	13.33
Chloromethane	13	U F1	13	5.7	ug/L			08/11/17 23:23	13.33
1,1-Dichloroethane	13	U	13	3.3	ug/L			08/11/17 23:23	13.33
1,2-Dichloroethane	13	U	13	4.0	ug/L			08/11/17 23:23	13.33
1,1-Dichloroethene	13	U	13	3.6	ug/L			08/11/17 23:23	13.33
1,2-Dichloropropane	13	U	13	4.0	ug/L			08/11/17 23:23	13.33
cis-1,3-Dichloropropene	13	U	13	3.5	ug/L			08/11/17 23:23	13.33
trans-1,3-Dichloropropene	13	U	13	4.1	ug/L			08/11/17 23:23	13.33
Ethylbenzene	13	U	13	3.5	ug/L			08/11/17 23:23	13.33
2-Hexanone	130	U	130	16	ug/L			08/11/17 23:23	13.33
Methylene Chloride	13	U	13	7.1	ug/L			08/11/17 23:23	13.33
4-Methyl-2-pentanone (MIBK)	130	U	130	9.5	ug/L			08/11/17 23:23	13.33
Styrene	13	U	13	3.1	ug/L			08/11/17 23:23	13.33
1,1,2,2-Tetrachloroethane	13	U	13	4.3	ug/L			08/11/17 23:23	13.33
Tetrachloroethene	9.2	J	13	4.0	ug/L			08/11/17 23:23	13.33
Toluene	13	U	13	3.1	ug/L			08/11/17 23:23	13.33
Trichloroethene	13	U	13	4.4	ug/L			08/11/17 23:23	13.33
Vinyl chloride	70		13	6.0	ug/L			08/11/17 23:23	13.33
Xylenes, Total	27	U	27	3.2	ug/L			08/11/17 23:23	13.33
1,1,1-Trichloroethane	13	U	13	3.1	ug/L			08/11/17 23:23	13.33
1,1,2-Trichloroethane	13	U	13	4.5	ug/L			08/11/17 23:23	13.33
Cyclohexane	13	U	13	5.9	ug/L			08/11/17 23:23	13.33
1,2-Dibromo-3-Chloropropane	27	U	27	6.3	ug/L			08/11/17 23:23	13.33
Ethylene Dibromide	13	U	13	3.1	ug/L			08/11/17 23:23	13.33
Dichlorodifluoromethane	13	U	13	6.7	ug/L			08/11/17 23:23	13.33
cis-1,2-Dichloroethene	430		13	4.0	ug/L			08/11/17 23:23	13.33
trans-1,2-Dichloroethene	86		13	3.9	ug/L			08/11/17 23:23	13.33
Isopropylbenzene	13	U	13	2.8	ug/L			08/11/17 23:23	13.33
Methyl acetate	130	U	130	19	ug/L			08/11/17 23:23	13.33
Methyl tert-butyl ether	13	U	13	3.6	ug/L			08/11/17 23:23	13.33
1,1,2-Trichloro-1,2,2-trifluoroethane	13	U	13	5.5	ug/L			08/11/17 23:23	13.33
1,2,4-Trichlorobenzene	13	U	13	3.6	ug/L			08/11/17 23:23	13.33
1,2-Dichlorobenzene	13	U	13	3.5	ug/L			08/11/17 23:23	13.33
1,3-Dichlorobenzene	13	U	13	4.3	ug/L			08/11/17 23:23	13.33
1,4-Dichlorobenzene	13	U	13	3.1	ug/L			08/11/17 23:23	13.33
Trichlorofluoromethane	13	U	13	6.7	ug/L			08/11/17 23:23	13.33
Chlorodibromomethane	13	U	13	3.3	ug/L			08/11/17 23:23	13.33
Methylcyclohexane	13	U	13	6.0	ug/L			08/11/17 23:23	13.33
Naphthalene	13	U	13	3.3	ug/L			08/11/17 23:23	13.33

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-47

Lab Sample ID: 240-83244-4

Date Collected: 08/01/17 13:20

Matrix: Water

Date Received: 08/04/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	105		61 - 138		08/11/17 23:23	13.33
4-Bromofluorobenzene (Surr)	108		69 - 120		08/11/17 23:23	13.33
Toluene-d8 (Surr)	107		73 - 120		08/11/17 23:23	13.33
Dibromofluoromethane (Surr)	98		69 - 124		08/11/17 23:23	13.33

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-48

Lab Sample ID: 240-83244-5

Date Collected: 08/01/17 14:25

Matrix: Water

Date Received: 08/04/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2500	U	2500	440	ug/L			08/11/17 16:25	250
Benzene	250	U	250	70	ug/L			08/11/17 16:25	250
Dichlorobromomethane	250	U	250	75	ug/L			08/11/17 16:25	250
Bromoform	250	U	250	110	ug/L			08/11/17 16:25	250
Bromomethane	250	U	250	110	ug/L			08/11/17 16:25	250
2-Butanone (MEK)	2500	U	2500	260	ug/L			08/11/17 16:25	250
Carbon disulfide	250	U	250	85	ug/L			08/11/17 16:25	250
Carbon tetrachloride	250	U	250	88	ug/L			08/11/17 16:25	250
Chlorobenzene	250	U	250	80	ug/L			08/11/17 16:25	250
Chloroethane	250	U	250	100	ug/L			08/11/17 16:25	250
Chloroform	250	U	250	78	ug/L			08/11/17 16:25	250
Chloromethane	250	U	250	110	ug/L			08/11/17 16:25	250
1,1-Dichloroethane	250	U	250	63	ug/L			08/11/17 16:25	250
1,2-Dichloroethane	250	U	250	75	ug/L			08/11/17 16:25	250
1,1-Dichloroethene	250	U	250	68	ug/L			08/11/17 16:25	250
1,2-Dichloropropane	250	U	250	75	ug/L			08/11/17 16:25	250
cis-1,3-Dichloropropene	250	U	250	65	ug/L			08/11/17 16:25	250
trans-1,3-Dichloropropene	250	U	250	78	ug/L			08/11/17 16:25	250
Ethylbenzene	250	U	250	65	ug/L			08/11/17 16:25	250
2-Hexanone	2500	U	2500	310	ug/L			08/11/17 16:25	250
Methylene Chloride	250	U	250	130	ug/L			08/11/17 16:25	250
4-Methyl-2-pentanone (MIBK)	2500	U	2500	180	ug/L			08/11/17 16:25	250
Styrene	250	U	250	58	ug/L			08/11/17 16:25	250
1,1,2,2-Tetrachloroethane	250	U	250	80	ug/L			08/11/17 16:25	250
Tetrachloroethene	5400		250	75	ug/L			08/11/17 16:25	250
Toluene	250	U	250	58	ug/L			08/11/17 16:25	250
Trichloroethene	250	U	250	83	ug/L			08/11/17 16:25	250
Vinyl chloride	250	U	250	110	ug/L			08/11/17 16:25	250
Xylenes, Total	500	U	500	60	ug/L			08/11/17 16:25	250
1,1,1-Trichloroethane	250	U	250	58	ug/L			08/11/17 16:25	250
1,1,2-Trichloroethane	250	U	250	85	ug/L			08/11/17 16:25	250
Cyclohexane	250	U	250	110	ug/L			08/11/17 16:25	250
1,2-Dibromo-3-Chloropropane	500	U	500	120	ug/L			08/11/17 16:25	250
Ethylene Dibromide	250	U	250	58	ug/L			08/11/17 16:25	250
Dichlorodifluoromethane	250	U	250	130	ug/L			08/11/17 16:25	250
cis-1,2-Dichloroethene	250	U	250	75	ug/L			08/11/17 16:25	250
trans-1,2-Dichloroethene	250	U	250	73	ug/L			08/11/17 16:25	250
Isopropylbenzene	250	U	250	53	ug/L			08/11/17 16:25	250
Methyl acetate	2500	U	2500	360	ug/L			08/11/17 16:25	250
Methyl tert-butyl ether	250	U	250	68	ug/L			08/11/17 16:25	250
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	100	ug/L			08/11/17 16:25	250
1,2,4-Trichlorobenzene	250	U	250	68	ug/L			08/11/17 16:25	250
1,2-Dichlorobenzene	250	U	250	65	ug/L			08/11/17 16:25	250
1,3-Dichlorobenzene	250	U	250	80	ug/L			08/11/17 16:25	250
1,4-Dichlorobenzene	250	U	250	58	ug/L			08/11/17 16:25	250
Trichlorofluoromethane	250	U	250	130	ug/L			08/11/17 16:25	250
Chlorodibromomethane	250	U	250	63	ug/L			08/11/17 16:25	250
Methylcyclohexane	250	U	250	110	ug/L			08/11/17 16:25	250
Naphthalene	250	U	250	63	ug/L			08/11/17 16:25	250

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-48

Lab Sample ID: 240-83244-5

Date Collected: 08/01/17 14:25

Matrix: Water

Date Received: 08/04/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	101		61 - 138		08/11/17 16:25	250
4-Bromofluorobenzene (Surr)	110		69 - 120		08/11/17 16:25	250
Toluene-d8 (Surr)	100		73 - 120		08/11/17 16:25	250
Dibromofluoromethane (Surr)	96		69 - 124		08/11/17 16:25	250

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-49

Lab Sample ID: 240-83244-6

Date Collected: 08/01/17 16:40

Matrix: Water

Date Received: 08/04/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	500	U	500	88	ug/L			08/11/17 16:46	50
Benzene	47	J	50	14	ug/L			08/11/17 16:46	50
Dichlorobromomethane	50	U	50	15	ug/L			08/11/17 16:46	50
Bromoform	50	U	50	22	ug/L			08/11/17 16:46	50
Bromomethane	50	U	50	21	ug/L			08/11/17 16:46	50
2-Butanone (MEK)	500	U	500	51	ug/L			08/11/17 16:46	50
Carbon disulfide	50	U	50	17	ug/L			08/11/17 16:46	50
Carbon tetrachloride	50	U	50	18	ug/L			08/11/17 16:46	50
Chlorobenzene	50	U	50	16	ug/L			08/11/17 16:46	50
Chloroethane	50	U	50	21	ug/L			08/11/17 16:46	50
Chloroform	50	U	50	16	ug/L			08/11/17 16:46	50
Chloromethane	50	U	50	22	ug/L			08/11/17 16:46	50
1,1-Dichloroethane	50	U	50	13	ug/L			08/11/17 16:46	50
1,2-Dichloroethane	50	U	50	15	ug/L			08/11/17 16:46	50
1,1-Dichloroethene	50	U	50	14	ug/L			08/11/17 16:46	50
1,2-Dichloropropane	50	U	50	15	ug/L			08/11/17 16:46	50
cis-1,3-Dichloropropene	50	U	50	13	ug/L			08/11/17 16:46	50
trans-1,3-Dichloropropene	50	U	50	16	ug/L			08/11/17 16:46	50
Ethylbenzene	50	U	50	13	ug/L			08/11/17 16:46	50
2-Hexanone	500	U	500	62	ug/L			08/11/17 16:46	50
Methylene Chloride	50	U	50	27	ug/L			08/11/17 16:46	50
4-Methyl-2-pentanone (MIBK)	500	U	500	36	ug/L			08/11/17 16:46	50
Styrene	50	U	50	12	ug/L			08/11/17 16:46	50
1,1,2,2-Tetrachloroethane	50	U	50	16	ug/L			08/11/17 16:46	50
Tetrachloroethene	61		50	15	ug/L			08/11/17 16:46	50
Toluene	50	U	50	12	ug/L			08/11/17 16:46	50
Trichloroethene	50	U	50	17	ug/L			08/11/17 16:46	50
Vinyl chloride	170		50	23	ug/L			08/11/17 16:46	50
Xylenes, Total	100	U	100	12	ug/L			08/11/17 16:46	50
1,1,1-Trichloroethane	50	U	50	12	ug/L			08/11/17 16:46	50
1,1,2-Trichloroethane	50	U	50	17	ug/L			08/11/17 16:46	50
Cyclohexane	50	U	50	22	ug/L			08/11/17 16:46	50
1,2-Dibromo-3-Chloropropane	100	U	100	24	ug/L			08/11/17 16:46	50
Ethylene Dibromide	50	U	50	12	ug/L			08/11/17 16:46	50
Dichlorodifluoromethane	50	U	50	25	ug/L			08/11/17 16:46	50
cis-1,2-Dichloroethene	1000		50	15	ug/L			08/11/17 16:46	50
trans-1,2-Dichloroethene	54		50	15	ug/L			08/11/17 16:46	50
Isopropylbenzene	50	U	50	11	ug/L			08/11/17 16:46	50
Methyl acetate	500	U	500	72	ug/L			08/11/17 16:46	50
Methyl tert-butyl ether	50	U	50	14	ug/L			08/11/17 16:46	50
1,1,2-Trichloro-1,2,2-trifluoroethane	50	U	50	21	ug/L			08/11/17 16:46	50
1,2,4-Trichlorobenzene	50	U	50	14	ug/L			08/11/17 16:46	50
1,2-Dichlorobenzene	50	U	50	13	ug/L			08/11/17 16:46	50
1,3-Dichlorobenzene	50	U	50	16	ug/L			08/11/17 16:46	50
1,4-Dichlorobenzene	50	U	50	12	ug/L			08/11/17 16:46	50
Trichlorofluoromethane	50	U	50	25	ug/L			08/11/17 16:46	50
Chlorodibromomethane	50	U	50	13	ug/L			08/11/17 16:46	50
Methylcyclohexane	50	U	50	23	ug/L			08/11/17 16:46	50
Naphthalene	50	U	50	13	ug/L			08/11/17 16:46	50

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-49

Date Collected: 08/01/17 16:40

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-6

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	104		61 - 138		08/11/17 16:46	50
4-Bromofluorobenzene (Surr)	110		69 - 120		08/11/17 16:46	50
Toluene-d8 (Surr)	103		73 - 120		08/11/17 16:46	50
Dibromofluoromethane (Surr)	93		69 - 124		08/11/17 16:46	50

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83244-7

Date Collected: 08/01/17 00:00

Matrix: Water

Date Received: 08/04/17 09:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/11/17 17:08	1
Benzene	1.0	U	1.0	0.28	ug/L			08/11/17 17:08	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/11/17 17:08	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/11/17 17:08	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/11/17 17:08	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/11/17 17:08	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/11/17 17:08	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/11/17 17:08	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/11/17 17:08	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/11/17 17:08	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/11/17 17:08	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/11/17 17:08	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/11/17 17:08	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/11/17 17:08	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/11/17 17:08	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/11/17 17:08	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/11/17 17:08	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/11/17 17:08	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/11/17 17:08	1
2-Hexanone	10	U	10	1.2	ug/L			08/11/17 17:08	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/11/17 17:08	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/11/17 17:08	1
Styrene	1.0	U	1.0	0.23	ug/L			08/11/17 17:08	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/11/17 17:08	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/11/17 17:08	1
Toluene	1.0	U	1.0	0.23	ug/L			08/11/17 17:08	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/11/17 17:08	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/11/17 17:08	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/11/17 17:08	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/11/17 17:08	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/11/17 17:08	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/11/17 17:08	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/11/17 17:08	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/11/17 17:08	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/11/17 17:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/11/17 17:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/11/17 17:08	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/11/17 17:08	1
Methyl acetate	10	U	10	1.4	ug/L			08/11/17 17:08	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/11/17 17:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/11/17 17:08	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/11/17 17:08	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/11/17 17:08	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/11/17 17:08	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/11/17 17:08	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/11/17 17:08	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/11/17 17:08	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/11/17 17:08	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/11/17 17:08	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83244-7

Date Collected: 08/01/17 00:00

Matrix: Water

Date Received: 08/04/17 09:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	104		61 - 138		08/11/17 17:08	1
4-Bromofluorobenzene (Surr)	110		69 - 120		08/11/17 17:08	1
Toluene-d8 (Surr)	103		73 - 120		08/11/17 17:08	1
Dibromofluoromethane (Surr)	98		69 - 124		08/11/17 17:08	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-14

Lab Sample ID: 240-83244-8

Date Collected: 08/02/17 11:55

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 98.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	960	U	960	93	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Benzene	240	U	240	23	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Dichlorobromomethane	240	U	240	17	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Bromoform	240	U	240	22	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Bromomethane	240	U	240	27	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
2-Butanone (MEK)	960	U	960	48	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Carbon disulfide	240	U	240	17	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Carbon tetrachloride	240	U	240	26	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Chlorobenzene	240	U	240	29	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Chloroethane	240	U	240	27	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Chloroform	240	U	240	23	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Chloromethane	240	U	240	17	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,1-Dichloroethane	240	U	240	30	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,2-Dichloroethane	240	U	240	29	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,1-Dichloroethene	240	U	240	35	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,2-Dichloropropane	240	U	240	29	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
cis-1,3-Dichloropropene	240	U	240	22	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
trans-1,3-Dichloropropene	240	U	240	14	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Ethylbenzene	240	U	240	34	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
2-Hexanone	960	U	960	83	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Methylene Chloride	240	U	240	62	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
4-Methyl-2-pentanone (MIBK)	960	U	960	38	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Styrene	240	U	240	9.6	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,1,2,2-Tetrachloroethane	240	U	240	23	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Tetrachloroethene	2100		240	20	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Toluene	240	U	240	23	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Trichloroethene	240	U	240	36	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Vinyl chloride	240	U	240	16	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Xylenes, Total	480	U	480	27	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,1,1-Trichloroethane	240	U	240	27	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,1,2-Trichloroethane	240	U	240	22	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Cyclohexane	480	U	480	29	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,2-Dibromo-3-Chloropropane	480	U	480	46	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Ethylene Dibromide	240	U	240	22	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Dichlorodifluoromethane	240	U	240	21	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
cis-1,2-Dichloroethene	240	U	240	34	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
trans-1,2-Dichloroethene	240	U	240	34	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Isopropylbenzene	240	U	240	33	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Methyl acetate	1200	U	1200	72	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Methyl tert-butyl ether	240	U	240	25	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	240	U	240	22	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,2,4-Trichlorobenzene	240	U	240	25	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,2-Dichlorobenzene	240	U	240	17	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,3-Dichlorobenzene	240	U	240	37	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
1,4-Dichlorobenzene	240	U	240	26	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Trichlorofluoromethane	240	U	240	33	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Chlorodibromomethane	240	U	240	33	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Methylcyclohexane	480	U	480	36	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1
Naphthalene	240	U	240	19	ug/Kg	☼	08/04/17 14:03	08/10/17 13:24	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-14

Lab Sample ID: 240-83244-8

Date Collected: 08/02/17 11:55

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 98.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	136		64 - 144	08/04/17 14:03	08/10/17 13:24	1
4-Bromofluorobenzene (Surr)	125		58 - 142	08/04/17 14:03	08/10/17 13:24	1
Toluene-d8 (Surr)	122		61 - 137	08/04/17 14:03	08/10/17 13:24	1
Dibromofluoromethane (Surr)	116		31 - 155	08/04/17 14:03	08/10/17 13:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	98.8		0.1	0.1	%			08/04/17 15:48	1
Percent Moisture	1.2		0.1	0.1	%			08/04/17 15:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-15

Lab Sample ID: 240-83244-9

Date Collected: 08/02/17 12:02

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 97.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	19	U	19	2.8	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Benzene	4.6	U	4.6	0.30	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Dichlorobromomethane	4.6	U	4.6	0.31	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Bromoform	4.6	U	4.6	0.37	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Bromomethane	4.6	U	4.6	0.55	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
2-Butanone (MEK)	19	U	19	1.2	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Carbon disulfide	4.6	U	4.6	0.19	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Carbon tetrachloride	4.6	U	4.6	0.23	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Chlorobenzene	4.6	U	4.6	0.31	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Chloroethane	4.6	U	4.6	0.35	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Chloroform	4.6	U	4.6	0.21	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Chloromethane	4.6	U	4.6	0.35	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,1-Dichloroethane	4.6	U	4.6	0.31	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,2-Dichloroethane	4.6	U	4.6	0.27	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,1-Dichloroethene	4.6	U	4.6	0.50	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,2-Dichloropropane	4.6	U	4.6	0.29	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
cis-1,3-Dichloropropene	4.6	U	4.6	0.24	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
trans-1,3-Dichloropropene	4.6	U	4.6	0.19	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Ethylbenzene	4.6	U	4.6	0.25	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
2-Hexanone	19	U	19	0.54	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Methylene Chloride	2.9	J B	4.6	0.22	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
4-Methyl-2-pentanone (MIBK)	19	U	19	0.82	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Styrene	4.6	U	4.6	0.25	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,1,2,2-Tetrachloroethane	4.6	U *	4.6	0.24	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Tetrachloroethene	110		4.6	0.34	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Toluene	0.37	J	4.6	0.32	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Trichloroethene	4.6	U	4.6	0.38	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Vinyl chloride	4.6	U	4.6	0.26	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Xylenes, Total	9.3	U	9.3	0.37	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,1,1-Trichloroethane	4.6	U	4.6	0.21	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,1,2-Trichloroethane	4.6	U	4.6	0.36	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Cyclohexane	9.3	U	9.3	0.19	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,2-Dibromo-3-Chloropropane	9.3	U	9.3	0.63	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Ethylene Dibromide	4.6	U	4.6	0.32	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Dichlorodifluoromethane	4.6	U	4.6	0.32	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
cis-1,2-Dichloroethene	4.6	U	4.6	0.26	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
trans-1,2-Dichloroethene	4.6	U	4.6	0.35	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Isopropylbenzene	4.6	U	4.6	0.19	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Methyl acetate	23	U	23	1.1	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Methyl tert-butyl ether	4.6	U	4.6	0.25	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.6	U	4.6	0.45	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,2,4-Trichlorobenzene	4.6	U	4.6	0.22	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,2-Dichlorobenzene	4.6	U	4.6	0.20	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,3-Dichlorobenzene	4.6	U	4.6	0.27	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
1,4-Dichlorobenzene	4.6	U	4.6	0.32	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Trichlorofluoromethane	4.6	U	4.6	0.22	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Chlorodibromomethane	4.6	U	4.6	0.28	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Methylcyclohexane	9.3	U	9.3	0.21	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1
Naphthalene	4.6	U	4.6	0.31	ug/Kg	☼	08/04/17 11:00	08/09/17 20:28	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-15

Lab Sample ID: 240-83244-9

Date Collected: 08/02/17 12:02

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 97.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		61 - 127	08/04/17 11:00	08/09/17 20:28	1
4-Bromofluorobenzene (Surr)	84		61 - 132	08/04/17 11:00	08/09/17 20:28	1
Toluene-d8 (Surr)	77		66 - 125	08/04/17 11:00	08/09/17 20:28	1
Dibromofluoromethane (Surr)	76		43 - 131	08/04/17 11:00	08/09/17 20:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	97.1		0.1	0.1	%			08/04/17 15:48	1
Percent Moisture	2.9		0.1	0.1	%			08/04/17 15:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-16

Lab Sample ID: 240-83244-10

Date Collected: 08/02/17 12:25

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 98.0

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	16	U	16	2.4	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Benzene	4.0	U	4.0	0.26	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Dichlorobromomethane	4.0	U	4.0	0.26	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Bromoform	4.0	U	4.0	0.32	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Bromomethane	4.0	U	4.0	0.47	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
2-Butanone (MEK)	16	U	16	1.0	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Carbon disulfide	4.0	U	4.0	0.17	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Carbon tetrachloride	4.0	U	4.0	0.20	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Chlorobenzene	4.0	U	4.0	0.26	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Chloroethane	4.0	U	4.0	0.30	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Chloroform	4.0	U	4.0	0.18	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Chloromethane	4.0	U	4.0	0.30	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,1-Dichloroethane	4.0	U	4.0	0.26	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,2-Dichloroethane	4.0	U	4.0	0.23	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,1-Dichloroethene	4.0	U	4.0	0.43	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,2-Dichloropropane	4.0	U	4.0	0.25	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
cis-1,3-Dichloropropene	4.0	U	4.0	0.21	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
trans-1,3-Dichloropropene	4.0	U	4.0	0.17	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Ethylbenzene	4.0	U	4.0	0.22	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
2-Hexanone	16	U	16	0.46	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Methylene Chloride	2.4	J B	4.0	0.19	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
4-Methyl-2-pentanone (MIBK)	16	U	16	0.71	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Styrene	4.0	U	4.0	0.22	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,1,2,2-Tetrachloroethane	4.0	U *	4.0	0.21	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Tetrachloroethene	86		4.0	0.30	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Toluene	0.27	J	4.0	0.27	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Trichloroethene	4.0	U	4.0	0.33	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Vinyl chloride	4.0	U	4.0	0.22	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Xylenes, Total	8.0	U	8.0	0.32	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,1,1-Trichloroethane	4.0	U	4.0	0.18	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,1,2-Trichloroethane	4.0	U	4.0	0.31	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Cyclohexane	8.0	U	8.0	0.17	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,2-Dibromo-3-Chloropropane	8.0	U	8.0	0.54	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Ethylene Dibromide	4.0	U	4.0	0.28	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Dichlorodifluoromethane	4.0	U	4.0	0.28	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
cis-1,2-Dichloroethene	4.0	U	4.0	0.22	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
trans-1,2-Dichloroethene	4.0	U	4.0	0.30	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Isopropylbenzene	4.0	U	4.0	0.16	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Methyl acetate	20	U	20	0.94	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Methyl tert-butyl ether	4.0	U	4.0	0.22	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.0	U	4.0	0.39	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,2,4-Trichlorobenzene	4.0	U	4.0	0.19	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,2-Dichlorobenzene	4.0	U	4.0	0.18	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,3-Dichlorobenzene	4.0	U	4.0	0.23	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
1,4-Dichlorobenzene	4.0	U	4.0	0.28	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Trichlorofluoromethane	4.0	U	4.0	0.19	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Chlorodibromomethane	4.0	U	4.0	0.24	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Methylcyclohexane	8.0	U	8.0	0.18	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1
Naphthalene	4.0	U	4.0	0.26	ug/Kg	☼	08/04/17 11:00	08/09/17 20:49	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-16

Lab Sample ID: 240-83244-10

Date Collected: 08/02/17 12:25

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 98.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	80		61 - 127	08/04/17 11:00	08/09/17 20:49	1
4-Bromofluorobenzene (Surr)	85		61 - 132	08/04/17 11:00	08/09/17 20:49	1
Toluene-d8 (Surr)	75		66 - 125	08/04/17 11:00	08/09/17 20:49	1
Dibromofluoromethane (Surr)	76		43 - 131	08/04/17 11:00	08/09/17 20:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	98.0		0.1	0.1	%			08/04/17 15:48	1
Percent Moisture	2.0		0.1	0.1	%			08/04/17 15:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-17

Lab Sample ID: 240-83244-11

Date Collected: 08/02/17 12:45

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 94.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	8.9	J	17	2.6	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Benzene	4.2	U	4.2	0.27	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Dichlorobromomethane	4.2	U	4.2	0.28	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Bromoform	4.2	U	4.2	0.34	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Bromomethane	4.2	U	4.2	0.50	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
2-Butanone (MEK)	17	U	17	1.1	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Carbon disulfide	4.2	U	4.2	0.18	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Carbon tetrachloride	4.2	U	4.2	0.21	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Chlorobenzene	4.2	U	4.2	0.28	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Chloroethane	4.2	U	4.2	0.32	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Chloroform	4.2	U	4.2	0.20	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Chloromethane	4.2	U	4.2	0.32	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,1-Dichloroethane	4.2	U	4.2	0.28	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,2-Dichloroethane	4.2	U	4.2	0.25	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,1-Dichloroethene	4.2	U	4.2	0.46	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,2-Dichloropropane	4.2	U	4.2	0.26	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
cis-1,3-Dichloropropene	4.2	U	4.2	0.22	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
trans-1,3-Dichloropropene	4.2	U	4.2	0.18	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Ethylbenzene	4.2	U	4.2	0.23	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
2-Hexanone	17	U	17	0.49	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Methylene Chloride	3.1	J B	4.2	0.20	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
4-Methyl-2-pentanone (MIBK)	17	U	17	0.76	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Styrene	4.2	U	4.2	0.23	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,1,2,2-Tetrachloroethane	4.2	U *	4.2	0.22	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Tetrachloroethene	14		4.2	0.31	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Toluene	4.2	U	4.2	0.29	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Trichloroethene	4.2	U	4.2	0.35	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Vinyl chloride	4.2	U	4.2	0.24	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Xylenes, Total	8.5	U	8.5	0.34	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,1,1-Trichloroethane	4.2	U	4.2	0.20	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,1,2-Trichloroethane	4.2	U	4.2	0.33	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Cyclohexane	8.5	U	8.5	0.18	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,2-Dibromo-3-Chloropropane	8.5	U	8.5	0.58	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Ethylene Dibromide	4.2	U	4.2	0.30	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Dichlorodifluoromethane	4.2	U	4.2	0.30	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
cis-1,2-Dichloroethene	4.2	U	4.2	0.24	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
trans-1,2-Dichloroethene	4.2	U	4.2	0.32	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Isopropylbenzene	4.2	U	4.2	0.17	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Methyl acetate	21	U	21	0.99	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Methyl tert-butyl ether	4.2	U	4.2	0.23	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.2	U	4.2	0.42	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,2,4-Trichlorobenzene	4.2	U	4.2	0.20	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,2-Dichlorobenzene	4.2	U	4.2	0.19	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,3-Dichlorobenzene	4.2	U	4.2	0.25	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
1,4-Dichlorobenzene	4.2	U	4.2	0.30	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Trichlorofluoromethane	4.2	U	4.2	0.20	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Chlorodibromomethane	4.2	U	4.2	0.25	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Methylcyclohexane	8.5	U	8.5	0.20	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1
Naphthalene	4.2	U	4.2	0.28	ug/Kg	☼	08/04/17 11:00	08/09/17 21:11	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-17

Lab Sample ID: 240-83244-11

Date Collected: 08/02/17 12:45

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 94.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	79		61 - 127	08/04/17 11:00	08/09/17 21:11	1
4-Bromofluorobenzene (Surr)	83		61 - 132	08/04/17 11:00	08/09/17 21:11	1
Toluene-d8 (Surr)	73		66 - 125	08/04/17 11:00	08/09/17 21:11	1
Dibromofluoromethane (Surr)	74		43 - 131	08/04/17 11:00	08/09/17 21:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	94.1		0.1	0.1	%			08/04/17 15:48	1
Percent Moisture	5.9		0.1	0.1	%			08/04/17 15:48	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-18

Lab Sample ID: 240-83244-12

Date Collected: 08/02/17 14:30

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 78.4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1200	U	1200	120	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Benzene	310	U	310	29	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Dichlorobromomethane	310	U	310	22	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Bromoform	310	U	310	28	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Bromomethane	310	U	310	34	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
2-Butanone (MEK)	1200	U	1200	61	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Carbon disulfide	310	U	310	22	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Carbon tetrachloride	310	U	310	33	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Chlorobenzene	310	U	310	37	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Chloroethane	310	U	310	34	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Chloroform	310	U	310	29	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Chloromethane	310	U	310	22	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,1-Dichloroethane	310	U	310	38	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,2-Dichloroethane	310	U	310	37	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,1-Dichloroethene	310	U	310	44	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,2-Dichloropropane	310	U	310	37	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
cis-1,3-Dichloropropene	310	U	310	28	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
trans-1,3-Dichloropropene	310	U	310	18	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Ethylbenzene	310	U	310	43	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
2-Hexanone	1200	U	1200	110	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Methylene Chloride	310	U	310	79	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
4-Methyl-2-pentanone (MIBK)	49	J	1200	49	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Styrene	310	U	310	12	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,1,2,2-Tetrachloroethane	310	U	310	29	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Tetrachloroethene	960		310	26	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Toluene	310	U	310	29	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Trichloroethene	310	U	310	45	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Vinyl chloride	310	U	310	21	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Xylenes, Total	260	J	610	34	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,1,1-Trichloroethane	310	U	310	34	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,1,2-Trichloroethane	310	U	310	28	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Cyclohexane	610	U	610	37	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,2-Dibromo-3-Chloropropane	610	U	610	59	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Ethylene Dibromide	310	U	310	28	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Dichlorodifluoromethane	310	U	310	27	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
cis-1,2-Dichloroethene	140	J	310	43	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
trans-1,2-Dichloroethene	310	U	310	43	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Isopropylbenzene	310	U	310	42	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Methyl acetate	1500	U	1500	92	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Methyl tert-butyl ether	310	U	310	32	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,1,2-Trichloro-1,2,2-trifluoroethane	310	U	310	28	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,2,4-Trichlorobenzene	310	U	310	32	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,2-Dichlorobenzene	310	U	310	22	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,3-Dichlorobenzene	310	U	310	46	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
1,4-Dichlorobenzene	310	U	310	33	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Trichlorofluoromethane	310	U	310	42	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Chlorodibromomethane	310	U	310	42	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Methylcyclohexane	610	U	610	45	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1
Naphthalene	310	U	310	24	ug/Kg	☼	08/04/17 14:03	08/10/17 13:46	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-18

Lab Sample ID: 240-83244-12

Date Collected: 08/02/17 14:30

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 78.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		64 - 144	08/04/17 14:03	08/10/17 13:46	1
4-Bromofluorobenzene (Surr)	92		58 - 142	08/04/17 14:03	08/10/17 13:46	1
Toluene-d8 (Surr)	90		61 - 137	08/04/17 14:03	08/10/17 13:46	1
Dibromofluoromethane (Surr)	82		31 - 155	08/04/17 14:03	08/10/17 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.4		0.1	0.1	%			08/04/17 15:48	1
Percent Moisture	21.6		0.1	0.1	%			08/04/17 15:48	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (61-127)	BFB (61-132)	TOL (66-125)	DBFM (43-131)
240-83244-9	S-170802-RA-15	80	84	77	76
240-83244-10	S-170802-RA-16	80	85	75	76
240-83244-11	S-170802-RA-17	79	83	73	74
LCS 240-290464/5	Lab Control Sample	75	89	76	79
MB 240-290464/6	Method Blank	79	90	77	76

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (64-144)	BFB (58-142)	TOL (61-137)	DBFM (31-155)
240-83244-8	S-170802-RA-14	136	125	122	116
240-83244-12	S-170802-RA-18	98	92	90	82
LCS 240-290030/2-A	Lab Control Sample	94	96	90	87
MB 240-290030/1-A	Method Blank	88	88	84	74

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (61-138)	BFB (69-120)	TOL (73-120)	DBFM (69-124)
240-83244-1	W-170801-RA-44	107	106	106	98
240-83244-2	W-170801-RA-45	105	105	104	100
240-83244-2 MS	W-170801-RA-45	99	116	109	96
240-83244-2 MSD	W-170801-RA-45	107	113	111	96
240-83244-3	W-170801-RA-46	108	110	107	99
240-83244-4	W-170801-RA-47	105	108	107	98
240-83244-4 MS	W-170801-RA-47	100	118	111	96
240-83244-4 MSD	W-170801-RA-47	100	115	110	97
240-83244-5	W-170801-RA-48	101	110	100	96
240-83244-6	W-170801-RA-49	104	110	103	93
240-83244-7	TRIP BLANK	104	110	103	98
LCS 240-290637/4	Lab Control Sample	106	112	108	94
LCS 240-290842/4	Lab Control Sample	106	118	106	97
MB 240-290637/6	Method Blank	102	106	108	96
MB 240-290842/6	Method Blank	103	111	103	95

TestAmerica Canton

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

1

2

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-290030/1-A
Matrix: Solid
Analysis Batch: 290053

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 290030

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1000	U	1000	97	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Benzene	250	U	250	24	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Dichlorobromomethane	250	U	250	18	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Bromoform	250	U	250	23	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Bromomethane	250	U	250	28	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
2-Butanone (MEK)	1000	U	1000	50	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Carbon disulfide	250	U	250	18	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Carbon tetrachloride	250	U	250	27	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Chlorobenzene	250	U	250	30	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Chloroethane	250	U	250	28	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Chloroform	250	U	250	24	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Chloromethane	250	U	250	18	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,1-Dichloroethane	250	U	250	31	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,2-Dichloroethane	250	U	250	30	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,1-Dichloroethene	250	U	250	36	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,2-Dichloropropane	250	U	250	30	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
cis-1,3-Dichloropropene	250	U	250	23	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
trans-1,3-Dichloropropene	250	U	250	15	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Ethylbenzene	250	U	250	35	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
2-Hexanone	1000	U	1000	86	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Methylene Chloride	250	U	250	65	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
4-Methyl-2-pentanone (MIBK)	1000	U	1000	40	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Styrene	250	U	250	10	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,1,2,2-Tetrachloroethane	250	U	250	24	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Tetrachloroethene	250	U	250	21	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Toluene	250	U	250	24	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Trichloroethene	250	U	250	37	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Vinyl chloride	250	U	250	17	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Xylenes, Total	500	U	500	28	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,1,1-Trichloroethane	250	U	250	28	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,1,2-Trichloroethane	250	U	250	23	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Cyclohexane	500	U	500	30	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,2-Dibromo-3-Chloropropane	500	U	500	48	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Ethylene Dibromide	250	U	250	23	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Dichlorodifluoromethane	250	U	250	22	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
cis-1,2-Dichloroethene	250	U	250	35	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
trans-1,2-Dichloroethene	250	U	250	35	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Isopropylbenzene	250	U	250	34	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Methyl acetate	1300	U	1300	75	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Methyl tert-butyl ether	250	U	250	26	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250	23	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,2,4-Trichlorobenzene	250	U	250	26	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,2-Dichlorobenzene	250	U	250	18	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,3-Dichlorobenzene	250	U	250	38	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
1,4-Dichlorobenzene	250	U	250	27	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Trichlorofluoromethane	250	U	250	34	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Chlorodibromomethane	250	U	250	34	ug/Kg		08/04/17 14:03	08/05/17 00:23	1
Methylcyclohexane	500	U	500	37	ug/Kg		08/04/17 14:03	08/05/17 00:23	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-290030/1-A
Matrix: Solid
Analysis Batch: 290053

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 290030

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	250	U	250	20	ug/Kg		08/04/17 14:03	08/05/17 00:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		64 - 144	08/04/17 14:03	08/05/17 00:23	1
4-Bromofluorobenzene (Surr)	88		58 - 142	08/04/17 14:03	08/05/17 00:23	1
Toluene-d8 (Surr)	84		61 - 137	08/04/17 14:03	08/05/17 00:23	1
Dibromofluoromethane (Surr)	74		31 - 155	08/04/17 14:03	08/05/17 00:23	1

Lab Sample ID: LCS 240-290030/2-A
Matrix: Solid
Analysis Batch: 290053

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290030

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acetone	2000	1950		ug/Kg		97	24 - 125
Benzene	1000	1060		ug/Kg		106	77 - 120
Dichlorobromomethane	1000	987		ug/Kg		99	61 - 132
Bromoform	1000	786		ug/Kg		79	40 - 140
Bromomethane	1000	881		ug/Kg		88	10 - 153
2-Butanone (MEK)	2000	1870		ug/Kg		93	51 - 120
Carbon disulfide	1000	810		ug/Kg		81	17 - 163
Carbon tetrachloride	1000	846		ug/Kg		85	43 - 144
Chlorobenzene	1000	1090		ug/Kg		109	76 - 120
Chloroethane	1000	905		ug/Kg		90	10 - 166
Chloroform	1000	1030		ug/Kg		103	74 - 120
Chloromethane	1000	1170		ug/Kg		117	41 - 124
1,1-Dichloroethane	1000	1110		ug/Kg		111	72 - 120
1,2-Dichloroethane	1000	1080		ug/Kg		108	71 - 120
1,1-Dichloroethene	1000	964		ug/Kg		96	58 - 130
1,2-Dichloropropane	1000	1180		ug/Kg		118	78 - 122
cis-1,3-Dichloropropene	1000	989		ug/Kg		99	66 - 126
trans-1,3-Dichloropropene	1000	884		ug/Kg		88	55 - 121
Ethylbenzene	1000	1090		ug/Kg		109	76 - 120
2-Hexanone	2000	2030		ug/Kg		101	52 - 129
Methylene Chloride	1000	1170		ug/Kg		117	64 - 126
4-Methyl-2-pentanone (MIBK)	2000	2080		ug/Kg		104	65 - 131
Styrene	1000	1090		ug/Kg		109	80 - 120
1,1,2,2-Tetrachloroethane	1000	1030		ug/Kg		103	78 - 120
Tetrachloroethene	1000	1070		ug/Kg		107	68 - 122
Toluene	1000	1080		ug/Kg		108	74 - 120
Trichloroethene	1000	1000		ug/Kg		100	73 - 123
Vinyl chloride	1000	1100		ug/Kg		110	49 - 131
Xylenes, Total	2000	2220		ug/Kg		111	78 - 120
1,1,1-Trichloroethane	1000	991		ug/Kg		99	60 - 136
1,1,2-Trichloroethane	1000	1100		ug/Kg		110	80 - 120
Cyclohexane	1000	1130		ug/Kg		113	66 - 129
1,2-Dibromo-3-Chloropropane	1000	661		ug/Kg		66	40 - 133
Ethylene Dibromide	1000	1040		ug/Kg		104	80 - 120
Dichlorodifluoromethane	1000	889		ug/Kg		89	15 - 127

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290030/2-A
Matrix: Solid
Analysis Batch: 290053

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290030

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	1000	1060		ug/Kg		106	78 - 120
trans-1,2-Dichloroethene	1000	1050		ug/Kg		105	74 - 124
Isopropylbenzene	1000	1120		ug/Kg		112	76 - 124
Methyl acetate	2000	2140		ug/Kg		107	63 - 126
Methyl tert-butyl ether	1000	1080		ug/Kg		108	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	1020		ug/Kg		102	64 - 125
1,2,4-Trichlorobenzene	1000	975		ug/Kg		97	60 - 124
1,2-Dichlorobenzene	1000	1080		ug/Kg		108	75 - 120
1,3-Dichlorobenzene	1000	1110		ug/Kg		111	72 - 120
1,4-Dichlorobenzene	1000	1070		ug/Kg		107	71 - 120
Trichlorofluoromethane	1000	907		ug/Kg		91	28 - 152
Chlorodibromomethane	1000	879		ug/Kg		88	46 - 125
Methylcyclohexane	1000	990		ug/Kg		99	71 - 126
m-Xylene & p-Xylene	1000	1100		ug/Kg		110	78 - 120
o-Xylene	1000	1120		ug/Kg		112	77 - 120
Naphthalene	1000	910		ug/Kg		91	68 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		64 - 144
4-Bromofluorobenzene (Surr)	96		58 - 142
Toluene-d8 (Surr)	90		61 - 137
Dibromofluoromethane (Surr)	87		31 - 155

Lab Sample ID: MB 240-290464/6
Matrix: Solid
Analysis Batch: 290464

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	20	U	20	3.1	ug/Kg			08/09/17 11:32	1
Benzene	5.0	U	5.0	0.32	ug/Kg			08/09/17 11:32	1
Dichlorobromomethane	5.0	U	5.0	0.33	ug/Kg			08/09/17 11:32	1
Bromoform	5.0	U	5.0	0.40	ug/Kg			08/09/17 11:32	1
Bromomethane	5.0	U	5.0	0.59	ug/Kg			08/09/17 11:32	1
2-Butanone (MEK)	20	U	20	1.3	ug/Kg			08/09/17 11:32	1
Carbon disulfide	5.0	U	5.0	0.21	ug/Kg			08/09/17 11:32	1
Carbon tetrachloride	5.0	U	5.0	0.25	ug/Kg			08/09/17 11:32	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			08/09/17 11:32	1
Chloroethane	5.0	U	5.0	0.38	ug/Kg			08/09/17 11:32	1
Chloroform	5.0	U	5.0	0.23	ug/Kg			08/09/17 11:32	1
Chloromethane	5.0	U	5.0	0.38	ug/Kg			08/09/17 11:32	1
1,1-Dichloroethane	5.0	U	5.0	0.33	ug/Kg			08/09/17 11:32	1
1,2-Dichloroethane	5.0	U	5.0	0.29	ug/Kg			08/09/17 11:32	1
1,1-Dichloroethene	5.0	U	5.0	0.54	ug/Kg			08/09/17 11:32	1
1,2-Dichloropropane	5.0	U	5.0	0.31	ug/Kg			08/09/17 11:32	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.26	ug/Kg			08/09/17 11:32	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.21	ug/Kg			08/09/17 11:32	1
Ethylbenzene	5.0	U	5.0	0.27	ug/Kg			08/09/17 11:32	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-290464/6
Matrix: Solid
Analysis Batch: 290464

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Hexanone	20	U	20	0.58	ug/Kg			08/09/17 11:32	1
Methylene Chloride	3.08	J	5.0	0.24	ug/Kg			08/09/17 11:32	1
4-Methyl-2-pentanone (MIBK)	20	U	20	0.89	ug/Kg			08/09/17 11:32	1
Styrene	5.0	U	5.0	0.27	ug/Kg			08/09/17 11:32	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.26	ug/Kg			08/09/17 11:32	1
Tetrachloroethene	5.0	U	5.0	0.37	ug/Kg			08/09/17 11:32	1
Toluene	5.0	U	5.0	0.34	ug/Kg			08/09/17 11:32	1
Trichloroethene	5.0	U	5.0	0.41	ug/Kg			08/09/17 11:32	1
Vinyl chloride	5.0	U	5.0	0.28	ug/Kg			08/09/17 11:32	1
Xylenes, Total	10	U	10	0.40	ug/Kg			08/09/17 11:32	1
1,1,1-Trichloroethane	5.0	U	5.0	0.23	ug/Kg			08/09/17 11:32	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			08/09/17 11:32	1
Cyclohexane	10	U	10	0.21	ug/Kg			08/09/17 11:32	1
1,2-Dibromo-3-Chloropropane	10	U	10	0.68	ug/Kg			08/09/17 11:32	1
Ethylene Dibromide	5.0	U	5.0	0.35	ug/Kg			08/09/17 11:32	1
Dichlorodifluoromethane	5.0	U	5.0	0.35	ug/Kg			08/09/17 11:32	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.28	ug/Kg			08/09/17 11:32	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.38	ug/Kg			08/09/17 11:32	1
Isopropylbenzene	5.0	U	5.0	0.20	ug/Kg			08/09/17 11:32	1
Methyl acetate	25	U	25	1.2	ug/Kg			08/09/17 11:32	1
Methyl tert-butyl ether	5.0	U	5.0	0.27	ug/Kg			08/09/17 11:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	0.49	ug/Kg			08/09/17 11:32	1
1,2,4-Trichlorobenzene	5.0	U	5.0	0.24	ug/Kg			08/09/17 11:32	1
1,2-Dichlorobenzene	5.0	U	5.0	0.22	ug/Kg			08/09/17 11:32	1
1,3-Dichlorobenzene	5.0	U	5.0	0.29	ug/Kg			08/09/17 11:32	1
1,4-Dichlorobenzene	5.0	U	5.0	0.35	ug/Kg			08/09/17 11:32	1
Trichlorofluoromethane	5.0	U	5.0	0.24	ug/Kg			08/09/17 11:32	1
Chlorodibromomethane	5.0	U	5.0	0.30	ug/Kg			08/09/17 11:32	1
Methylcyclohexane	10	U	10	0.23	ug/Kg			08/09/17 11:32	1
Naphthalene	5.0	U	5.0	0.33	ug/Kg			08/09/17 11:32	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	79		61 - 127		08/09/17 11:32	1
4-Bromofluorobenzene (Surr)	90		61 - 132		08/09/17 11:32	1
Toluene-d8 (Surr)	77		66 - 125		08/09/17 11:32	1
Dibromofluoromethane (Surr)	76		43 - 131		08/09/17 11:32	1

Lab Sample ID: LCS 240-290464/5
Matrix: Solid
Analysis Batch: 290464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	51.9		ug/Kg		104	77 - 120
Dichlorobromomethane	50.0	54.7		ug/Kg		109	61 - 132
Bromoform	50.0	45.5		ug/Kg		91	40 - 140
Bromomethane	20.0	16.8		ug/Kg		84	10 - 153
2-Butanone (MEK)	100	84.1		ug/Kg		84	51 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290464/5

Matrix: Solid

Analysis Batch: 290464

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	50.0	47.1		ug/Kg		94	17 - 163
Carbon tetrachloride	50.0	54.7		ug/Kg		109	43 - 144
Chlorobenzene	50.0	50.4		ug/Kg		101	76 - 120
Chloroethane	20.0	15.3		ug/Kg		77	10 - 166
Chloroform	50.0	51.1		ug/Kg		102	74 - 120
Chloromethane	20.0	18.9		ug/Kg		95	41 - 124
1,1-Dichloroethane	50.0	54.7		ug/Kg		109	72 - 120
1,2-Dichloroethane	50.0	47.4		ug/Kg		95	71 - 120
1,1-Dichloroethene	50.0	39.1		ug/Kg		78	58 - 130
1,2-Dichloropropane	50.0	58.1		ug/Kg		116	78 - 122
cis-1,3-Dichloropropene	50.0	58.1		ug/Kg		116	66 - 126
trans-1,3-Dichloropropene	50.0	44.9		ug/Kg		90	55 - 121
Ethylbenzene	50.0	52.4		ug/Kg		105	76 - 120
2-Hexanone	100	101		ug/Kg		101	52 - 129
Methylene Chloride	50.0	53.8		ug/Kg		108	64 - 126
4-Methyl-2-pentanone (MIBK)	100	94.7		ug/Kg		95	65 - 131
Styrene	50.0	50.3		ug/Kg		101	80 - 120
1,1,2,2-Tetrachloroethane	50.0	62.4	*	ug/Kg		125	78 - 120
Tetrachloroethene	50.0	49.8		ug/Kg		100	68 - 122
Toluene	50.0	49.5		ug/Kg		99	74 - 120
Trichloroethene	50.0	44.8		ug/Kg		90	73 - 123
Vinyl chloride	20.0	17.5		ug/Kg		87	49 - 131
Xylenes, Total	100	108		ug/Kg		108	78 - 120
1,1,1-Trichloroethane	50.0	57.1		ug/Kg		114	60 - 136
1,1,2-Trichloroethane	50.0	47.9		ug/Kg		96	80 - 120
Cyclohexane	50.0	61.0		ug/Kg		122	66 - 129
1,2-Dibromo-3-Chloropropane	50.0	51.8		ug/Kg		104	40 - 133
Ethylene Dibromide	50.0	49.3		ug/Kg		99	80 - 120
Dichlorodifluoromethane	20.0	17.5		ug/Kg		88	15 - 127
cis-1,2-Dichloroethene	50.0	51.5		ug/Kg		103	78 - 120
trans-1,2-Dichloroethene	50.0	54.4		ug/Kg		109	74 - 124
Isopropylbenzene	50.0	55.6		ug/Kg		111	76 - 124
Methyl acetate	100	97.7		ug/Kg		98	63 - 126
Methyl tert-butyl ether	50.0	53.6		ug/Kg		107	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	38.4		ug/Kg		77	64 - 125
1,2,4-Trichlorobenzene	50.0	46.6		ug/Kg		93	60 - 124
1,2-Dichlorobenzene	50.0	49.1		ug/Kg		98	75 - 120
1,3-Dichlorobenzene	50.0	50.3		ug/Kg		101	72 - 120
1,4-Dichlorobenzene	50.0	49.3		ug/Kg		99	71 - 120
Trichlorofluoromethane	20.0	16.5		ug/Kg		82	28 - 152
Chlorodibromomethane	50.0	43.9		ug/Kg		88	46 - 125
Methylcyclohexane	50.0	57.4		ug/Kg		115	71 - 126
m-Xylene & p-Xylene	50.0	54.2		ug/Kg		108	78 - 120
o-Xylene	50.0	53.5		ug/Kg		107	77 - 120
Naphthalene	50.0	44.5		ug/Kg		89	68 - 123

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290464/5
Matrix: Solid
Analysis Batch: 290464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	75		61 - 127
4-Bromofluorobenzene (Surr)	89		61 - 132
Toluene-d8 (Surr)	76		66 - 125
Dibromofluoromethane (Surr)	79		43 - 131

Lab Sample ID: MB 240-290637/6
Matrix: Water
Analysis Batch: 290637

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	10	U	10	1.8	ug/L			08/10/17 13:11	1
Benzene	1.0	U	1.0	0.28	ug/L			08/10/17 13:11	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/10/17 13:11	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/10/17 13:11	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/10/17 13:11	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/10/17 13:11	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/10/17 13:11	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/10/17 13:11	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/10/17 13:11	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/10/17 13:11	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/10/17 13:11	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/10/17 13:11	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/10/17 13:11	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/10/17 13:11	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/10/17 13:11	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/10/17 13:11	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/10/17 13:11	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/10/17 13:11	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/10/17 13:11	1
2-Hexanone	10	U	10	1.2	ug/L			08/10/17 13:11	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/10/17 13:11	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/10/17 13:11	1
Styrene	1.0	U	1.0	0.23	ug/L			08/10/17 13:11	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/10/17 13:11	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/10/17 13:11	1
Toluene	1.0	U	1.0	0.23	ug/L			08/10/17 13:11	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/10/17 13:11	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/10/17 13:11	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/10/17 13:11	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/10/17 13:11	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/10/17 13:11	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/10/17 13:11	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/10/17 13:11	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/10/17 13:11	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/10/17 13:11	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/10/17 13:11	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/10/17 13:11	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/10/17 13:11	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-290637/6
Matrix: Water
Analysis Batch: 290637

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	10	U	10	1.4	ug/L			08/10/17 13:11	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/10/17 13:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/10/17 13:11	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/10/17 13:11	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/10/17 13:11	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/10/17 13:11	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/10/17 13:11	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/10/17 13:11	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/10/17 13:11	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/10/17 13:11	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/10/17 13:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		61 - 138		08/10/17 13:11	1
4-Bromofluorobenzene (Surr)	106		69 - 120		08/10/17 13:11	1
Toluene-d8 (Surr)	108		73 - 120		08/10/17 13:11	1
Dibromofluoromethane (Surr)	96		69 - 124		08/10/17 13:11	1

Lab Sample ID: LCS 240-290637/4
Matrix: Water
Analysis Batch: 290637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	11.7		ug/L		59	35 - 131
Benzene	10.0	10.5		ug/L		105	79 - 120
Dichlorobromomethane	10.0	10.4		ug/L		104	79 - 125
Bromoform	10.0	8.83		ug/L		88	55 - 145
Bromomethane	10.0	15.0		ug/L		150	17 - 158
2-Butanone (MEK)	20.0	18.1		ug/L		90	43 - 149
Carbon disulfide	10.0	10.8		ug/L		108	49 - 141
Carbon tetrachloride	10.0	8.99		ug/L		90	55 - 171
Chlorobenzene	10.0	9.69		ug/L		97	80 - 120
Chloroethane	10.0	10.5		ug/L		105	10 - 149
Chloroform	10.0	10.1		ug/L		101	80 - 120
Chloromethane	10.0	12.1		ug/L		121	59 - 124
1,1-Dichloroethane	10.0	10.9		ug/L		109	74 - 120
1,2-Dichloroethane	10.0	10.1		ug/L		101	68 - 133
1,1-Dichloroethene	10.0	9.03		ug/L		90	65 - 127
1,2-Dichloropropane	10.0	11.7		ug/L		117	78 - 127
cis-1,3-Dichloropropene	10.0	10.8		ug/L		108	75 - 120
trans-1,3-Dichloropropene	10.0	10.6		ug/L		106	67 - 120
Ethylbenzene	10.0	9.77		ug/L		98	80 - 120
2-Hexanone	20.0	20.4		ug/L		102	28 - 169
Methylene Chloride	10.0	10.7		ug/L		107	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	23.9		ug/L		119	53 - 144
Styrene	10.0	9.83		ug/L		98	80 - 121
1,1,2,2-Tetrachloroethane	10.0	11.8		ug/L		118	58 - 122
Tetrachloroethene	10.0	8.38		ug/L		84	80 - 122

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290637/4

Matrix: Water

Analysis Batch: 290637

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	10.0	10.5		ug/L		105	78 - 120
Trichloroethene	10.0	8.75		ug/L		87	76 - 124
Vinyl chloride	10.0	10.3		ug/L		103	65 - 124
Xylenes, Total	20.0	19.7		ug/L		98	80 - 120
1,1,1-Trichloroethane	10.0	9.44		ug/L		94	64 - 147
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	76 - 121
Cyclohexane	10.0	10.1		ug/L		101	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	8.76		ug/L		88	50 - 130
Ethylene Dibromide	10.0	9.52		ug/L		95	80 - 120
Dichlorodifluoromethane	10.0	9.88		ug/L		99	42 - 141
cis-1,2-Dichloroethene	10.0	10.1		ug/L		101	77 - 120
trans-1,2-Dichloroethene	10.0	10.1		ug/L		101	74 - 124
Isopropylbenzene	10.0	9.49		ug/L		95	80 - 128
Methyl acetate	20.0	20.6		ug/L		103	63 - 137
Methyl tert-butyl ether	10.0	10.5		ug/L		105	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	8.91		ug/L		89	65 - 144
1,2,4-Trichlorobenzene	10.0	7.95		ug/L		80	34 - 141
1,2-Dichlorobenzene	10.0	9.21		ug/L		92	80 - 120
1,3-Dichlorobenzene	10.0	9.62		ug/L		96	80 - 120
1,4-Dichlorobenzene	10.0	9.65		ug/L		96	80 - 120
Trichlorofluoromethane	10.0	12.2		ug/L		122	27 - 176
Chlorodibromomethane	10.0	9.80		ug/L		98	64 - 129
Methylcyclohexane	10.0	8.44		ug/L		84	63 - 141
m-Xylene & p-Xylene	10.0	9.92		ug/L		99	80 - 120
o-Xylene	10.0	9.75		ug/L		98	80 - 120
Naphthalene	10.0	7.75		ug/L		78	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		61 - 138
4-Bromofluorobenzene (Surr)	112		69 - 120
Toluene-d8 (Surr)	108		73 - 120
Dibromofluoromethane (Surr)	94		69 - 124

Lab Sample ID: 240-83244-2 MS

Matrix: Water

Analysis Batch: 290637

Client Sample ID: W-170801-RA-45

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	10	U	20.0	12.2		ug/L		61	19 - 133
Benzene	1.0	U	10.0	12.3		ug/L		123	69 - 127
Dichlorobromomethane	1.0	U	10.0	11.9		ug/L		119	75 - 128
Bromoform	1.0	U	10.0	9.84		ug/L		98	61 - 135
Bromomethane	1.0	U F1	10.0	19.2	F1	ug/L		192	10 - 148
2-Butanone (MEK)	10	U	20.0	19.0		ug/L		95	34 - 153
Carbon disulfide	1.0	U	10.0	12.5		ug/L		125	46 - 143
Carbon tetrachloride	1.0	U	10.0	10.7		ug/L		107	53 - 175
Chlorobenzene	1.0	U	10.0	11.1		ug/L		111	76 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-83244-2 MS

Matrix: Water

Analysis Batch: 290637

Client Sample ID: W-170801-RA-45

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	1.0	U	10.0	13.3		ug/L		133	10 - 141
Chloroform	1.0	U	10.0	11.5		ug/L		115	74 - 125
Chloromethane	1.0	U	10.0	12.2		ug/L		122	34 - 127
1,1-Dichloroethane	1.0	U F1	10.0	12.5	F1	ug/L		125	69 - 122
1,2-Dichloroethane	1.0	U	10.0	11.6		ug/L		116	64 - 138
1,1-Dichloroethene	1.0	U	10.0	11.1		ug/L		111	62 - 127
1,2-Dichloropropane	1.0	U	10.0	13.1		ug/L		131	72 - 131
cis-1,3-Dichloropropene	1.0	U F1	10.0	12.1	F1	ug/L		121	68 - 120
trans-1,3-Dichloropropene	1.0	U F1	10.0	11.8		ug/L		118	59 - 120
Ethylbenzene	1.0	U	10.0	11.3		ug/L		113	72 - 121
2-Hexanone	10	U	20.0	22.2		ug/L		111	21 - 184
Methylene Chloride	1.0	U	10.0	11.5		ug/L		115	52 - 137
4-Methyl-2-pentanone (MIBK)	10	U	20.0	24.2		ug/L		121	53 - 147
Styrene	1.0	U	10.0	11.6		ug/L		116	74 - 125
1,1,2,2-Tetrachloroethane	1.0	U F1	10.0	12.5	F1	ug/L		125	51 - 123
Tetrachloroethene	11		10.0	20.7		ug/L		99	69 - 126
Toluene	0.25	J	10.0	12.4		ug/L		121	69 - 125
Trichloroethene	20		10.0	29.6		ug/L		99	68 - 129
Vinyl chloride	1.0	U	10.0	11.7		ug/L		117	55 - 123
Xylenes, Total	2.0	U	20.0	22.4		ug/L		112	71 - 122
1,1,1-Trichloroethane	1.0	U	10.0	11.1		ug/L		111	57 - 156
1,1,2-Trichloroethane	1.0	U	10.0	11.9		ug/L		119	68 - 127
Cyclohexane	1.0	U	10.0	12.3		ug/L		123	56 - 135
1,2-Dibromo-3-Chloropropane	2.0	U	10.0	9.85		ug/L		98	48 - 130
Ethylene Dibromide	1.0	U	10.0	11.0		ug/L		110	73 - 121
Dichlorodifluoromethane	1.0	U	10.0	11.3		ug/L		113	45 - 130
cis-1,2-Dichloroethene	19	F1	10.0	32.0	F1	ug/L		128	69 - 127
trans-1,2-Dichloroethene	33		10.0	44.8	E	ug/L		116	66 - 131
Isopropylbenzene	1.0	U	10.0	10.9		ug/L		109	70 - 132
Methyl acetate	10	U	20.0	23.5		ug/L		118	52 - 139
Methyl tert-butyl ether	1.0	U	10.0	11.8		ug/L		118	67 - 125
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	10.5		ug/L		105	58 - 137
1,2,4-Trichlorobenzene	1.0	U	10.0	8.67		ug/L		87	26 - 138
1,2-Dichlorobenzene	1.0	U	10.0	10.6		ug/L		106	70 - 120
1,3-Dichlorobenzene	1.0	U	10.0	10.6		ug/L		106	71 - 120
1,4-Dichlorobenzene	1.0	U	10.0	10.7		ug/L		107	72 - 120
Trichlorofluoromethane	1.0	U	10.0	14.4		ug/L		144	28 - 172
Chlorodibromomethane	1.0	U	10.0	10.6		ug/L		106	62 - 131
Methylcyclohexane	1.0	U	10.0	10.2		ug/L		102	46 - 139
m-Xylene & p-Xylene	2.0	U	10.0	11.3		ug/L		113	70 - 121
o-Xylene	1.0	U	10.0	11.1		ug/L		111	71 - 125
Naphthalene	1.0	U	10.0	8.77		ug/L		88	28 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		61 - 138
4-Bromofluorobenzene (Surr)	116		69 - 120
Toluene-d8 (Surr)	109		73 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-83244-2 MS
Matrix: Water
Analysis Batch: 290637

Client Sample ID: W-170801-RA-45
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	96		69 - 124

Lab Sample ID: 240-83244-2 MSD
Matrix: Water
Analysis Batch: 290637

Client Sample ID: W-170801-RA-45
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	10	U	20.0	13.5		ug/L		68	19 - 133	10	35
Benzene	1.0	U	10.0	12.2		ug/L		122	69 - 127	0	10
Dichlorobromomethane	1.0	U	10.0	11.9		ug/L		119	75 - 128	0	13
Bromoform	1.0	U	10.0	9.87		ug/L		99	61 - 135	0	13
Bromomethane	1.0	U F1	10.0	14.9	F1	ug/L		149	10 - 148	25	35
2-Butanone (MEK)	10	U	20.0	19.5		ug/L		97	34 - 153	3	23
Carbon disulfide	1.0	U	10.0	12.3		ug/L		123	46 - 143	1	18
Carbon tetrachloride	1.0	U	10.0	10.5		ug/L		105	53 - 175	2	17
Chlorobenzene	1.0	U	10.0	11.2		ug/L		112	76 - 120	0	12
Chloroethane	1.0	U	10.0	10.6		ug/L		106	10 - 141	22	35
Chloroform	1.0	U	10.0	11.5		ug/L		115	74 - 125	0	11
Chloromethane	1.0	U	10.0	12.5		ug/L		125	34 - 127	3	25
1,1-Dichloroethane	1.0	U F1	10.0	12.5	F1	ug/L		125	69 - 122	0	11
1,2-Dichloroethane	1.0	U	10.0	11.8		ug/L		118	64 - 138	1	11
1,1-Dichloroethene	1.0	U	10.0	10.8		ug/L		108	62 - 127	3	14
1,2-Dichloropropane	1.0	U	10.0	13.1		ug/L		131	72 - 131	0	12
cis-1,3-Dichloropropene	1.0	U F1	10.0	12.2	F1	ug/L		122	68 - 120	1	13
trans-1,3-Dichloropropene	1.0	U F1	10.0	12.2	F1	ug/L		122	59 - 120	4	14
Ethylbenzene	1.0	U	10.0	11.5		ug/L		115	72 - 121	2	15
2-Hexanone	10	U	20.0	22.9		ug/L		114	21 - 184	3	12
Methylene Chloride	1.0	U	10.0	10.9		ug/L		109	52 - 137	5	12
4-Methyl-2-pentanone (MIBK)	10	U	20.0	26.0		ug/L		130	53 - 147	7	16
Styrene	1.0	U	10.0	11.7		ug/L		117	74 - 125	1	14
1,1,2,2-Tetrachloroethane	1.0	U F1	10.0	12.7	F1	ug/L		127	51 - 123	1	17
Tetrachloroethene	11		10.0	20.9		ug/L		101	69 - 126	1	18
Toluene	0.25	J	10.0	12.4		ug/L		122	69 - 125	0	14
Trichloroethene	20		10.0	28.7		ug/L		90	68 - 129	3	12
Vinyl chloride	1.0	U	10.0	11.9		ug/L		119	55 - 123	2	12
Xylenes, Total	2.0	U	20.0	22.2		ug/L		111	71 - 122	1	14
1,1,1-Trichloroethane	1.0	U	10.0	11.2		ug/L		112	57 - 156	1	13
1,1,2-Trichloroethane	1.0	U	10.0	11.7		ug/L		117	68 - 127	2	11
Cyclohexane	1.0	U	10.0	12.8		ug/L		128	56 - 135	4	35
1,2-Dibromo-3-Chloropropane	2.0	U	10.0	9.82		ug/L		98	48 - 130	0	31
Ethylene Dibromide	1.0	U	10.0	10.7		ug/L		107	73 - 121	3	12
Dichlorodifluoromethane	1.0	U	10.0	11.1		ug/L		111	45 - 130	2	34
cis-1,2-Dichloroethene	19	F1	10.0	30.7		ug/L		115	69 - 127	4	11
trans-1,2-Dichloroethene	33		10.0	41.6	E	ug/L		83	66 - 131	8	11
Isopropylbenzene	1.0	U	10.0	11.0		ug/L		110	70 - 132	1	16
Methyl acetate	10	U	20.0	25.3		ug/L		126	52 - 139	7	14
Methyl tert-butyl ether	1.0	U	10.0	11.9		ug/L		119	67 - 125	1	12

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-83244-2 MSD
Matrix: Water
Analysis Batch: 290637

Client Sample ID: W-170801-RA-45
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	11.0		ug/L		110	58 - 137	5	35
1,2,4-Trichlorobenzene	1.0	U	10.0	9.63		ug/L		96	26 - 138	10	35
1,2-Dichlorobenzene	1.0	U	10.0	10.6		ug/L		106	70 - 120	0	19
1,3-Dichlorobenzene	1.0	U	10.0	10.6		ug/L		106	71 - 120	1	18
1,4-Dichlorobenzene	1.0	U	10.0	10.9		ug/L		109	72 - 120	2	17
Trichlorofluoromethane	1.0	U	10.0	13.5		ug/L		135	28 - 172	6	26
Chlorodibromomethane	1.0	U	10.0	10.6		ug/L		106	62 - 131	0	15
Methylcyclohexane	1.0	U	10.0	10.2		ug/L		102	46 - 139	1	35
m-Xylene & p-Xylene	2.0	U	10.0	11.3		ug/L		113	70 - 121	1	15
o-Xylene	1.0	U	10.0	10.9		ug/L		109	71 - 125	1	15
Naphthalene	1.0	U	10.0	9.39		ug/L		94	28 - 150	7	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
1,2-Dichloroethane-d4 (Surr)	107		61 - 138
4-Bromofluorobenzene (Surr)	113		69 - 120
Toluene-d8 (Surr)	111		73 - 120
Dibromofluoromethane (Surr)	96		69 - 124

Lab Sample ID: MB 240-290842/6
Matrix: Water
Analysis Batch: 290842

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/11/17 15:11	1
Benzene	1.0	U	1.0	0.28	ug/L			08/11/17 15:11	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/11/17 15:11	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/11/17 15:11	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/11/17 15:11	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/11/17 15:11	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/11/17 15:11	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/11/17 15:11	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/11/17 15:11	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/11/17 15:11	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/11/17 15:11	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/11/17 15:11	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/11/17 15:11	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/11/17 15:11	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/11/17 15:11	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/11/17 15:11	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/11/17 15:11	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/11/17 15:11	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/11/17 15:11	1
2-Hexanone	10	U	10	1.2	ug/L			08/11/17 15:11	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/11/17 15:11	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/11/17 15:11	1
Styrene	1.0	U	1.0	0.23	ug/L			08/11/17 15:11	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/11/17 15:11	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-290842/6
Matrix: Water
Analysis Batch: 290842

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/11/17 15:11	1
Toluene	1.0	U	1.0	0.23	ug/L			08/11/17 15:11	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/11/17 15:11	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/11/17 15:11	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/11/17 15:11	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/11/17 15:11	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/11/17 15:11	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/11/17 15:11	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/11/17 15:11	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/11/17 15:11	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/11/17 15:11	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/11/17 15:11	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/11/17 15:11	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/11/17 15:11	1
Methyl acetate	10	U	10	1.4	ug/L			08/11/17 15:11	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/11/17 15:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/11/17 15:11	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/11/17 15:11	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/11/17 15:11	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/11/17 15:11	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/11/17 15:11	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/11/17 15:11	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/11/17 15:11	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/11/17 15:11	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/11/17 15:11	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	103		61 - 138		08/11/17 15:11	1
4-Bromofluorobenzene (Surr)	111		69 - 120		08/11/17 15:11	1
Toluene-d8 (Surr)	103		73 - 120		08/11/17 15:11	1
Dibromofluoromethane (Surr)	95		69 - 124		08/11/17 15:11	1

Lab Sample ID: LCS 240-290842/4
Matrix: Water
Analysis Batch: 290842

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	11.1		ug/L		111	79 - 120
Dichlorobromomethane	10.0	11.2		ug/L		112	79 - 125
Bromoform	10.0	9.21		ug/L		92	55 - 145
Bromomethane	10.0	13.3		ug/L		133	17 - 158
2-Butanone (MEK)	20.0	19.0		ug/L		95	43 - 149
Carbon disulfide	10.0	11.1		ug/L		111	49 - 141
Carbon tetrachloride	10.0	9.28		ug/L		93	55 - 171
Chlorobenzene	10.0	10.2		ug/L		102	80 - 120
Chloroethane	10.0	9.61		ug/L		96	10 - 149
Chloroform	10.0	10.6		ug/L		106	80 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290842/4

Matrix: Water

Analysis Batch: 290842

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	11.8		ug/L		118	59 - 124
1,1-Dichloroethane	10.0	11.3		ug/L		113	74 - 120
1,2-Dichloroethane	10.0	10.8		ug/L		108	68 - 133
1,1-Dichloroethene	10.0	9.39		ug/L		94	65 - 127
1,2-Dichloropropane	10.0	12.4		ug/L		124	78 - 127
cis-1,3-Dichloropropene	10.0	11.3		ug/L		113	75 - 120
trans-1,3-Dichloropropene	10.0	11.0		ug/L		110	67 - 120
Ethylbenzene	10.0	10.2		ug/L		102	80 - 120
2-Hexanone	20.0	19.7		ug/L		99	28 - 169
Methylene Chloride	10.0	10.7		ug/L		107	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	24.4		ug/L		122	53 - 144
Styrene	10.0	10.5		ug/L		105	80 - 121
1,1,2,2-Tetrachloroethane	10.0	10.6		ug/L		106	58 - 122
Tetrachloroethene	10.0	8.35		ug/L		84	80 - 122
Toluene	10.0	10.7		ug/L		107	78 - 120
Trichloroethene	10.0	9.27		ug/L		93	76 - 124
Vinyl chloride	10.0	10.3		ug/L		103	65 - 124
Xylenes, Total	20.0	21.1		ug/L		106	80 - 120
1,1,1-Trichloroethane	10.0	9.82		ug/L		98	64 - 147
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	76 - 121
Cyclohexane	10.0	10.6		ug/L		106	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	8.10		ug/L		81	50 - 130
Ethylene Dibromide	10.0	9.86		ug/L		99	80 - 120
Dichlorodifluoromethane	10.0	9.76		ug/L		98	42 - 141
cis-1,2-Dichloroethene	10.0	10.1		ug/L		101	77 - 120
trans-1,2-Dichloroethene	10.0	10.5		ug/L		105	74 - 124
Isopropylbenzene	10.0	10.4		ug/L		104	80 - 128
Methyl acetate	20.0	23.3		ug/L		117	63 - 137
Methyl tert-butyl ether	10.0	11.0		ug/L		110	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.28		ug/L		93	65 - 144
1,2,4-Trichlorobenzene	10.0	10.4		ug/L		104	34 - 141
1,2-Dichlorobenzene	10.0	9.92		ug/L		99	80 - 120
1,3-Dichlorobenzene	10.0	9.86		ug/L		99	80 - 120
1,4-Dichlorobenzene	10.0	9.92		ug/L		99	80 - 120
Trichlorofluoromethane	10.0	12.4		ug/L		124	27 - 176
Chlorodibromomethane	10.0	9.26		ug/L		93	64 - 129
Methylcyclohexane	10.0	9.08		ug/L		91	63 - 141
m-Xylene & p-Xylene	10.0	10.4		ug/L		104	80 - 120
o-Xylene	10.0	10.7		ug/L		107	80 - 120
Naphthalene	10.0	9.55		ug/L		95	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		61 - 138
4-Bromofluorobenzene (Surr)	118		69 - 120
Toluene-d8 (Surr)	106		73 - 120
Dibromofluoromethane (Surr)	97		69 - 124

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-83244-4 MS

Matrix: Water

Analysis Batch: 290842

Client Sample ID: W-170801-RA-47

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
Acetone	130	U	267	141		ug/L		53	19 - 133
Benzene	15		133	169		ug/L		115	69 - 127
Dichlorobromomethane	13	U	133	157		ug/L		118	75 - 128
Bromoform	13	U	133	123		ug/L		93	61 - 135
Bromomethane	13	U F1	133	235	F1	ug/L		176	10 - 148
2-Butanone (MEK)	130	U	267	240		ug/L		90	34 - 153
Carbon disulfide	13	U	133	154		ug/L		115	46 - 143
Carbon tetrachloride	13	U	133	127		ug/L		96	53 - 175
Chlorobenzene	13	U	133	137		ug/L		103	76 - 120
Chloroethane	13	U	133	162		ug/L		122	10 - 141
Chloroform	13	U	133	147		ug/L		110	74 - 125
Chloromethane	13	U F1	133	179	F1	ug/L		134	34 - 127
1,1-Dichloroethane	13	U	133	157		ug/L		118	69 - 122
1,2-Dichloroethane	13	U	133	148		ug/L		111	64 - 138
1,1-Dichloroethene	13	U	133	139		ug/L		104	62 - 127
1,2-Dichloropropane	13	U	133	166		ug/L		124	72 - 131
cis-1,3-Dichloropropene	13	U	133	151		ug/L		114	68 - 120
trans-1,3-Dichloropropene	13	U	133	151		ug/L		113	59 - 120
Ethylbenzene	13	U	133	135		ug/L		101	72 - 121
2-Hexanone	130	U	267	281		ug/L		105	21 - 184
Methylene Chloride	13	U	133	151		ug/L		113	52 - 137
4-Methyl-2-pentanone (MIBK)	130	U	267	314		ug/L		118	53 - 147
Styrene	13	U	133	143		ug/L		107	74 - 125
1,1,2,2-Tetrachloroethane	13	U	133	162		ug/L		122	51 - 123
Tetrachloroethene	9.2	J	133	126		ug/L		87	69 - 126
Toluene	13	U	133	149		ug/L		112	69 - 125
Trichloroethene	13	U	133	123		ug/L		92	68 - 129
Vinyl chloride	70		133	219		ug/L		112	55 - 123
Xylenes, Total	27	U	267	272		ug/L		102	71 - 122
1,1,1-Trichloroethane	13	U	133	136		ug/L		102	57 - 156
1,1,2-Trichloroethane	13	U	133	147		ug/L		110	68 - 127
Cyclohexane	13	U	133	140		ug/L		105	56 - 135
1,2-Dibromo-3-Chloropropane	27	U	133	120		ug/L		90	48 - 130
Ethylene Dibromide	13	U	133	139		ug/L		104	73 - 121
Dichlorodifluoromethane	13	U	133	135		ug/L		101	45 - 130
cis-1,2-Dichloroethene	430		133	563	E	ug/L		101	69 - 127
trans-1,2-Dichloroethene	86		133	224		ug/L		104	66 - 131
Isopropylbenzene	13	U	133	130		ug/L		97	70 - 132
Methyl acetate	130	U	267	310		ug/L		116	52 - 139
Methyl tert-butyl ether	13	U	133	151		ug/L		114	67 - 125
1,1,2-Trichloro-1,2,2-trifluoroethane	13	U	133	126		ug/L		94	58 - 137
1,2,4-Trichlorobenzene	13	U	133	101		ug/L		76	26 - 138
1,2-Dichlorobenzene	13	U	133	126		ug/L		95	70 - 120
1,3-Dichlorobenzene	13	U	133	127		ug/L		96	71 - 120
1,4-Dichlorobenzene	13	U	133	131		ug/L		98	72 - 120
Trichlorofluoromethane	13	U	133	170		ug/L		128	28 - 172
Chlorodibromomethane	13	U	133	132		ug/L		99	62 - 131

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-83244-4 MS

Matrix: Water

Analysis Batch: 290842

Client Sample ID: W-170801-RA-47

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylcyclohexane	13	U	133	116		ug/L		87	46 - 139
m-Xylene & p-Xylene	27	U	133	137		ug/L		103	70 - 121
o-Xylene	13	U	133	135		ug/L		102	71 - 125
Naphthalene	13	U	133	102		ug/L		77	28 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		61 - 138
4-Bromofluorobenzene (Surr)	118		69 - 120
Toluene-d8 (Surr)	111		73 - 120
Dibromofluoromethane (Surr)	96		69 - 124

Lab Sample ID: 240-83244-4 MSD

Matrix: Water

Analysis Batch: 290842

Client Sample ID: W-170801-RA-47

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	130	U	267	157		ug/L		59	19 - 133	10	35
Benzene	15		133	168		ug/L		115	69 - 127	1	10
Dichlorobromomethane	13	U	133	151		ug/L		113	75 - 128	4	13
Bromoform	13	U	133	123		ug/L		92	61 - 135	0	13
Bromomethane	13	U F1	133	258	F1	ug/L		193	10 - 148	9	35
2-Butanone (MEK)	130	U	267	251		ug/L		94	34 - 153	5	23
Carbon disulfide	13	U	133	157		ug/L		118	46 - 143	2	18
Carbon tetrachloride	13	U	133	131		ug/L		98	53 - 175	3	17
Chlorobenzene	13	U	133	137		ug/L		103	76 - 120	0	12
Chloroethane	13	U	133	188		ug/L		141	10 - 141	15	35
Chloroform	13	U	133	151		ug/L		113	74 - 125	3	11
Chloromethane	13	U F1	133	180	F1	ug/L		135	34 - 127	1	25
1,1-Dichloroethane	13	U	133	159		ug/L		119	69 - 122	1	11
1,2-Dichloroethane	13	U	133	153		ug/L		115	64 - 138	4	11
1,1-Dichloroethene	13	U	133	137		ug/L		103	62 - 127	2	14
1,2-Dichloropropane	13	U	133	166		ug/L		125	72 - 131	0	12
cis-1,3-Dichloropropene	13	U	133	147		ug/L		111	68 - 120	3	13
trans-1,3-Dichloropropene	13	U	133	150		ug/L		113	59 - 120	0	14
Ethylbenzene	13	U	133	130		ug/L		97	72 - 121	4	15
2-Hexanone	130	U	267	284		ug/L		107	21 - 184	1	12
Methylene Chloride	13	U	133	155		ug/L		116	52 - 137	3	12
4-Methyl-2-pentanone (MIBK)	130	U	267	309		ug/L		116	53 - 147	1	16
Styrene	13	U	133	142		ug/L		106	74 - 125	1	14
1,1,2,2-Tetrachloroethane	13	U	133	158		ug/L		118	51 - 123	3	17
Tetrachloroethene	9.2	J	133	124		ug/L		86	69 - 126	2	18
Toluene	13	U	133	148		ug/L		111	69 - 125	1	14
Trichloroethene	13	U	133	119		ug/L		89	68 - 129	3	12
Vinyl chloride	70		133	227		ug/L		118	55 - 123	4	12
Xylenes, Total	27	U	267	274		ug/L		103	71 - 122	1	14
1,1,1-Trichloroethane	13	U	133	140		ug/L		105	57 - 156	3	13
1,1,2-Trichloroethane	13	U	133	147		ug/L		110	68 - 127	0	11
Cyclohexane	13	U	133	141		ug/L		106	56 - 135	1	35

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-83244-4 MSD
Matrix: Water
Analysis Batch: 290842

Client Sample ID: W-170801-RA-47
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromo-3-Chloropropane	27	U	133	111		ug/L		83	48 - 130	8	31
Ethylene Dibromide	13	U	133	136		ug/L		102	73 - 121	2	12
Dichlorodifluoromethane	13	U	133	131		ug/L		99	45 - 130	3	34
cis-1,2-Dichloroethene	430		133	574	E	ug/L		110	69 - 127	2	11
trans-1,2-Dichloroethene	86		133	228		ug/L		106	66 - 131	2	11
Isopropylbenzene	13	U	133	132		ug/L		99	70 - 132	2	16
Methyl acetate	130	U	267	322		ug/L		121	52 - 139	4	14
Methyl tert-butyl ether	13	U	133	156		ug/L		117	67 - 125	3	12
1,1,2-Trichloro-1,2,2-trifluoroethane	13	U	133	124		ug/L		93	58 - 137	1	35
1,2,4-Trichlorobenzene	13	U	133	110		ug/L		83	26 - 138	9	35
1,2-Dichlorobenzene	13	U	133	129		ug/L		97	70 - 120	2	19
1,3-Dichlorobenzene	13	U	133	133		ug/L		99	71 - 120	4	18
1,4-Dichlorobenzene	13	U	133	130		ug/L		98	72 - 120	1	17
Trichlorofluoromethane	13	U	133	176		ug/L		132	28 - 172	3	26
Chlorodibromomethane	13	U	133	130		ug/L		98	62 - 131	2	15
Methylcyclohexane	13	U	133	117		ug/L		88	46 - 139	1	35
m-Xylene & p-Xylene	27	U	133	137		ug/L		102	70 - 121	0	15
o-Xylene	13	U	133	137		ug/L		103	71 - 125	1	15
Naphthalene	13	U	133	114		ug/L		85	28 - 150	11	35
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	100		61 - 138								
4-Bromofluorobenzene (Surr)	115		69 - 120								
Toluene-d8 (Surr)	110		73 - 120								
Dibromofluoromethane (Surr)	97		69 - 124								

Method: Moisture - Percent Moisture

Lab Sample ID: 240-83244-9 DU
Matrix: Solid
Analysis Batch: 289949

Client Sample ID: S-170802-RA-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	97.1		97.3		%		0.2	20
Percent Moisture	2.9		2.7		%		6	20

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

GC/MS VOA

Prep Batch: 290030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83244-8	S-170802-RA-14	Total/NA	Solid	5035	
240-83244-12	S-170802-RA-18	Total/NA	Solid	5035	
MB 240-290030/1-A	Method Blank	Total/NA	Solid	5035	
LCS 240-290030/2-A	Lab Control Sample	Total/NA	Solid	5035	

Prep Batch: 290052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83244-9	S-170802-RA-15	Total/NA	Solid	5035	
240-83244-10	S-170802-RA-16	Total/NA	Solid	5035	
240-83244-11	S-170802-RA-17	Total/NA	Solid	5035	

Analysis Batch: 290053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-290030/1-A	Method Blank	Total/NA	Solid	8260B	290030
LCS 240-290030/2-A	Lab Control Sample	Total/NA	Solid	8260B	290030

Analysis Batch: 290464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83244-9	S-170802-RA-15	Total/NA	Solid	8260B	290052
240-83244-10	S-170802-RA-16	Total/NA	Solid	8260B	290052
240-83244-11	S-170802-RA-17	Total/NA	Solid	8260B	290052
MB 240-290464/6	Method Blank	Total/NA	Solid	8260B	
LCS 240-290464/5	Lab Control Sample	Total/NA	Solid	8260B	

Analysis Batch: 290567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83244-8	S-170802-RA-14	Total/NA	Solid	8260B	290030
240-83244-12	S-170802-RA-18	Total/NA	Solid	8260B	290030

Analysis Batch: 290637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83244-1	W-170801-RA-44	Total/NA	Water	8260B	
240-83244-2	W-170801-RA-45	Total/NA	Water	8260B	
MB 240-290637/6	Method Blank	Total/NA	Water	8260B	
LCS 240-290637/4	Lab Control Sample	Total/NA	Water	8260B	
240-83244-2 MS	W-170801-RA-45	Total/NA	Water	8260B	
240-83244-2 MSD	W-170801-RA-45	Total/NA	Water	8260B	

Analysis Batch: 290842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83244-3	W-170801-RA-46	Total/NA	Water	8260B	
240-83244-4	W-170801-RA-47	Total/NA	Water	8260B	
240-83244-5	W-170801-RA-48	Total/NA	Water	8260B	
240-83244-6	W-170801-RA-49	Total/NA	Water	8260B	
240-83244-7	TRIP BLANK	Total/NA	Water	8260B	
MB 240-290842/6	Method Blank	Total/NA	Water	8260B	
LCS 240-290842/4	Lab Control Sample	Total/NA	Water	8260B	
240-83244-4 MS	W-170801-RA-47	Total/NA	Water	8260B	
240-83244-4 MSD	W-170801-RA-47	Total/NA	Water	8260B	

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

General Chemistry

Analysis Batch: 289949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83244-8	S-170802-RA-14	Total/NA	Solid	Moisture	
240-83244-9	S-170802-RA-15	Total/NA	Solid	Moisture	
240-83244-10	S-170802-RA-16	Total/NA	Solid	Moisture	
240-83244-11	S-170802-RA-17	Total/NA	Solid	Moisture	
240-83244-12	S-170802-RA-18	Total/NA	Solid	Moisture	
240-83244-9 DU	S-170802-RA-15	Total/NA	Solid	Moisture	

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- 10
- 11
- 12
- 13
- 14

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: W-170801-RA-44

Date Collected: 08/01/17 09:53

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	290637	08/10/17 15:13	LRW	TAL CAN

Client Sample ID: W-170801-RA-45

Date Collected: 08/01/17 10:35

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	290637	08/10/17 15:35	LRW	TAL CAN

Client Sample ID: W-170801-RA-46

Date Collected: 08/01/17 11:40

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	290842	08/11/17 23:01	LRW	TAL CAN

Client Sample ID: W-170801-RA-47

Date Collected: 08/01/17 13:20

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		13.33	290842	08/11/17 23:23	LRW	TAL CAN

Client Sample ID: W-170801-RA-48

Date Collected: 08/01/17 14:25

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		250	290842	08/11/17 16:25	LRW	TAL CAN

Client Sample ID: W-170801-RA-49

Date Collected: 08/01/17 16:40

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	290842	08/11/17 16:46	LRW	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: TRIP BLANK

Date Collected: 08/01/17 00:00

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	290842	08/11/17 17:08	LRW	TAL CAN

Client Sample ID: S-170802-RA-14

Date Collected: 08/02/17 11:55

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	289949	08/04/17 15:48	PW	TAL CAN

Client Sample ID: S-170802-RA-14

Date Collected: 08/02/17 11:55

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-8

Matrix: Solid

Percent Solids: 98.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			290030	08/04/17 14:03	LAM	TAL CAN
Total/NA	Analysis	8260B		1	290567	08/10/17 13:24	TJL2	TAL CAN

Client Sample ID: S-170802-RA-15

Date Collected: 08/02/17 12:02

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	289949	08/04/17 15:48	PW	TAL CAN

Client Sample ID: S-170802-RA-15

Date Collected: 08/02/17 12:02

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-9

Matrix: Solid

Percent Solids: 97.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			290052	08/04/17 11:00	LAM	TAL CAN
Total/NA	Analysis	8260B		1	290464	08/09/17 20:28	SAM	TAL CAN

Client Sample ID: S-170802-RA-16

Date Collected: 08/02/17 12:25

Date Received: 08/04/17 09:20

Lab Sample ID: 240-83244-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	289949	08/04/17 15:48	PW	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Client Sample ID: S-170802-RA-16

Lab Sample ID: 240-83244-10

Date Collected: 08/02/17 12:25

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			290052	08/04/17 11:00	LAM	TAL CAN
Total/NA	Analysis	8260B		1	290464	08/09/17 20:49	SAM	TAL CAN

Client Sample ID: S-170802-RA-17

Lab Sample ID: 240-83244-11

Date Collected: 08/02/17 12:45

Matrix: Solid

Date Received: 08/04/17 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	289949	08/04/17 15:48	PW	TAL CAN

Client Sample ID: S-170802-RA-17

Lab Sample ID: 240-83244-11

Date Collected: 08/02/17 12:45

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			290052	08/04/17 11:00	LAM	TAL CAN
Total/NA	Analysis	8260B		1	290464	08/09/17 21:11	SAM	TAL CAN

Client Sample ID: S-170802-RA-18

Lab Sample ID: 240-83244-12

Date Collected: 08/02/17 14:30

Matrix: Solid

Date Received: 08/04/17 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	289949	08/04/17 15:48	PW	TAL CAN

Client Sample ID: S-170802-RA-18

Lab Sample ID: 240-83244-12

Date Collected: 08/02/17 14:30

Matrix: Solid

Date Received: 08/04/17 09:20

Percent Solids: 78.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			290030	08/04/17 14:03	LAM	TAL CAN
Total/NA	Analysis	8260B		1	290567	08/10/17 13:46	TJL2	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83244-1

Laboratory: TestAmerica Canton

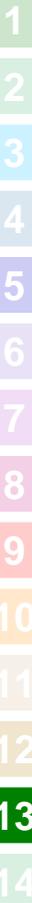
Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Minnesota	NELAP	5	039-999-348	12-31-17 *

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

* Accreditation/Certification renewal pending - accreditation/certification considered valid.





CONESTOGA-ROVERS & ASSOCIATES

3-3/33

CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States

Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: **SP-02436**

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 088751-40				Laboratory Name: Test America				Lab Location: H. Canton				SSOW ID:						
Project Name: 6714 Walker St.				Lab Contact:				Lab Quote No:				Cooler No:						
Project Location: St. Louis Park, MN				SAMPLE TYPE				CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)						
Chemistry Contact: Grant Anderson				Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	Carrier:			
Sampler(s): C. Ahrens															Airbill No:			
Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)			DATE (mrr/dd/yy)	TIME (hh:mm)	Matrix Code	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	MS/MSD Request	COMMENTS/ SPECIAL INSTRUCTIONS:
1	W-170801-RA-44			08/01/17	0953	WG	G		X							3	X	Contact Grant Anderson w/ questions.
2	↓ 45 MS/MSD			↓	1035	↓	↓		X							9	X	
3	↓ 46			↓	1140	↓	↓		X							3	X	
4	↓ 47			↓	1320	↓	↓		X							3	X	
5	↓ 48			↓	1425	↓	↓		X							3	X	
6	↓ 49			↓	1640	↓	↓		X							3	X	
7	Trip Blank															2	X	
8	S-170802-RA-14			08/02/17	1155	SO	G						X			4	X	
9	↓ 15			↓	1202	↓	↓						X			4	X	
10	↓ 16			↓	1225	↓	↓						X			4	X	
11	↓ 17			↓	1245	↓	↓						X			4	X	
12	↓ 18			↓	1430	↓	↓						X			4	X	
13																		
14																		
15																		
TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:								Total Number of Containers: 46				Notes/ Special Requirements:						
All Samples in Cooler must be on COC																		
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME											
1. <i>C. Ahrens</i>	GAD	8/3/17	16:00	1. <i>Jason</i>	TA	8/4/17	9:20											
2.				2.														
3.				3.														



THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY



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8/15/2017

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 85244

Client GHD Site Name _____ Cooler unpacked by: Zachary King
 Cooler Received on 8/4/17 Opened on 8/4/17

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____
 TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0°C) Observed Cooler Temp. 3.3 °C Corrected Cooler Temp. 3.3 °C
 2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 3. Shippers' packing slip attached to the cooler(s)? Yes No
 4. Did custody papers accompany the sample(s)? Yes No
 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
 7. Did all bottles arrive in good condition (Unbroken)? Yes No
 8. Could all bottle labels be reconciled with the COC? Yes No
 9. Were correct bottle(s) used for the test(s) indicated? Yes No
 10. Sufficient quantity received to perform indicated analyses? Yes No
 11. Are these work share samples?
 If yes, Questions 11-15 have been checked at the originating laboratory. Yes No
 11. Were sample(s) at the correct pH upon receipt? Yes No pH Strip Lot# HC697954
 12. Were VOAs on the COC? Yes No
 13. Were air bubbles >6 mm in any VOA vials? Yes No NA
 Larger than this. ←
 14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B763501UB Yes No
 15. Was a LL Hg or Me Hg trip blank present? Yes No
- Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
 Concerning _____

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: _____
Bubbles of varying sizes present in all vials

17. SAMPLE CONDITION
 Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION
 Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-83317-1

Client Project/Site: 88751, Hinshaw & Culbertson

For:

GHD Services Inc.

1801 Old Highway 8 NW

Suite 114

St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson



Authorized for release by:

8/15/2017 2:34:55 PM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Job ID: 240-83317-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-83317-1

Comments

No additional comments.

Receipt

The samples were received on 8/5/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.2° C.

GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for preparation batch 240-290253 and analytical batch 240-290464 recovered outside control limits for the following analytes: 1,1,2,2-Tetrachloroethane. This analytes was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-290253 and analytical batch 240-290464.

Method(s) 8260B: The laboratory control sample (LCS) for preparation batch 240-290253 and analytical batch 240-290567 recovered outside control limits for the following analyte: Acetone. This compound has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8260B: The laboratory control sample (LCS) for 290805 recovered outside control limits for multiple analytes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: There is no MS/MSD in batch 290805 due to the parent sample being cancelled.

Method(s) 8260B: The pH of the sample(s) was greater than 2. The samples were analyzed within the normal 14 day holding time; however, experimental evidence suggests that some aromatic compounds in wastewater samples, notably, Benzene, Toluene, and Ethylbenzene are susceptible to biological degradation if samples are not preserved to a pH of 2: W-170803-RA-50 (240-83317-1), W-170803-RA-52 (240-83317-3) and W-170803-RA-55 (240-83317-6), W-170803-RA-51 (240-83317-2).

Method(s) 8260B: The laboratory control sample (LCS) for 291021 recovered outside control limits for one or both the following analytes: 1,1,2-Trichloroethane, 1,1,2,2-Tetrachloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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Sample Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-83317-1	W-170803-RA-50	Water	08/03/17 09:00	08/05/17 09:30
240-83317-2	W-170803-RA-51	Water	08/03/17 10:05	08/05/17 09:30
240-83317-3	W-170803-RA-52	Water	08/03/17 10:55	08/05/17 09:30
240-83317-4	W-170803-RA-53	Water	08/03/17 12:00	08/05/17 09:30
240-83317-5	W-170803-RA-54	Water	08/03/17 13:00	08/05/17 09:30
240-83317-6	W-170803-RA-55	Water	08/03/17 15:30	08/05/17 09:30
240-83317-7	S-170804-RA-19	Solid	08/04/17 00:00	08/05/17 09:30
240-83317-8	S-170804-RA-20	Solid	08/04/17 00:00	08/05/17 09:30
240-83317-9	S-170804-RA-21	Solid	08/04/17 00:00	08/05/17 09:30
240-83317-10	TRIP BLANK	Water	08/03/17 00:00	08/05/17 09:30

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-50

Lab Sample ID: 240-83317-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	240		10	3.0	ug/L	10		8260B	Total/NA

Client Sample ID: W-170803-RA-51

Lab Sample ID: 240-83317-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1200		50	15	ug/L	50		8260B	Total/NA
Trichloroethene	17	J	50	17	ug/L	50		8260B	Total/NA
cis-1,2-Dichloroethene	26	J	50	15	ug/L	50		8260B	Total/NA
trans-1,2-Dichloroethene	45	J	50	15	ug/L	50		8260B	Total/NA

Client Sample ID: W-170803-RA-52

Lab Sample ID: 240-83317-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	40000		1000	300	ug/L	1000		8260B	Total/NA

Client Sample ID: W-170803-RA-53

Lab Sample ID: 240-83317-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	21		13	3.5	ug/L	12.5		8260B	Total/NA
Tetrachloroethene	9.6	J	13	3.8	ug/L	12.5		8260B	Total/NA
Vinyl chloride	150		13	5.6	ug/L	12.5		8260B	Total/NA
cis-1,2-Dichloroethene	380		13	3.8	ug/L	12.5		8260B	Total/NA
trans-1,2-Dichloroethene	63		13	3.6	ug/L	12.5		8260B	Total/NA

Client Sample ID: W-170803-RA-54

Lab Sample ID: 240-83317-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.6	J	20	3.5	ug/L	2		8260B	Total/NA
Benzene	32		2.0	0.56	ug/L	2		8260B	Total/NA
Ethylbenzene	8.8		2.0	0.52	ug/L	2		8260B	Total/NA
Tetrachloroethene	22		2.0	0.60	ug/L	2		8260B	Total/NA
Toluene	0.89	J	2.0	0.46	ug/L	2		8260B	Total/NA
Vinyl chloride	11		2.0	0.90	ug/L	2		8260B	Total/NA
Xylenes, Total	8.1		4.0	0.48	ug/L	2		8260B	Total/NA
cis-1,2-Dichloroethene	48		2.0	0.60	ug/L	2		8260B	Total/NA
trans-1,2-Dichloroethene	7.0		2.0	0.58	ug/L	2		8260B	Total/NA
Isopropylbenzene	1.7	J	2.0	0.42	ug/L	2		8260B	Total/NA
Naphthalene	25		2.0	0.50	ug/L	2		8260B	Total/NA

Client Sample ID: W-170803-RA-55

Lab Sample ID: 240-83317-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	550		130	38	ug/L	125		8260B	Total/NA
Trichloroethene	180		130	41	ug/L	125		8260B	Total/NA
Vinyl chloride	200		130	56	ug/L	125		8260B	Total/NA
cis-1,2-Dichloroethene	3100		130	38	ug/L	125		8260B	Total/NA
trans-1,2-Dichloroethene	84	J	130	36	ug/L	125		8260B	Total/NA
Naphthalene	64	J	130	31	ug/L	125		8260B	Total/NA

Client Sample ID: S-170804-RA-19

Lab Sample ID: 240-83317-7

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: S-170804-RA-19 (Continued)

Lab Sample ID: 240-83317-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	3.7	J B	6.4	0.31	ug/Kg	1	☼	8260B	Total/NA
Tetrachloroethene	8.9		6.4	0.47	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	0.80	J	6.4	0.42	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: S-170804-RA-20

Lab Sample ID: 240-83317-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	19	*	15	2.3	ug/Kg	1	☼	8260B	Total/NA
2-Hexanone	0.81	J	15	0.43	ug/Kg	1	☼	8260B	Total/NA
Methylene Chloride	0.55	J	3.7	0.18	ug/Kg	1	☼	8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	1.9	J	15	0.65	ug/Kg	1	☼	8260B	Total/NA
Naphthalene	0.46	J	3.7	0.24	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: S-170804-RA-21

Lab Sample ID: 240-83317-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	2.1	J	5.4	0.40	ug/Kg	1	☼	8260B	Total/NA
Toluene	0.39	J	5.4	0.36	ug/Kg	1	☼	8260B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83317-10

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-50

Lab Sample ID: 240-83317-1

Date Collected: 08/03/17 09:00

Matrix: Water

Date Received: 08/05/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	100	U	100	18	ug/L			08/11/17 14:58	10
Benzene	10	U	10	2.8	ug/L			08/11/17 14:58	10
Dichlorobromomethane	10	U	10	3.0	ug/L			08/11/17 14:58	10
Bromoform	10	U	10	4.3	ug/L			08/11/17 14:58	10
Bromomethane	10	U	10	4.2	ug/L			08/11/17 14:58	10
2-Butanone (MEK)	100	U	100	10	ug/L			08/11/17 14:58	10
Carbon disulfide	10	U	10	3.4	ug/L			08/11/17 14:58	10
Carbon tetrachloride	10	U	10	3.5	ug/L			08/11/17 14:58	10
Chlorobenzene	10	U	10	3.2	ug/L			08/11/17 14:58	10
Chloroethane	10	U	10	4.1	ug/L			08/11/17 14:58	10
Chloroform	10	U	10	3.1	ug/L			08/11/17 14:58	10
Chloromethane	10	U	10	4.3	ug/L			08/11/17 14:58	10
1,1-Dichloroethane	10	U	10	2.5	ug/L			08/11/17 14:58	10
1,2-Dichloroethane	10	U	10	3.0	ug/L			08/11/17 14:58	10
1,1-Dichloroethene	10	U	10	2.7	ug/L			08/11/17 14:58	10
1,2-Dichloropropane	10	U	10	3.0	ug/L			08/11/17 14:58	10
cis-1,3-Dichloropropene	10	U	10	2.6	ug/L			08/11/17 14:58	10
trans-1,3-Dichloropropene	10	U	10	3.1	ug/L			08/11/17 14:58	10
Ethylbenzene	10	U	10	2.6	ug/L			08/11/17 14:58	10
2-Hexanone	100	U	100	12	ug/L			08/11/17 14:58	10
Methylene Chloride	10	U	10	5.3	ug/L			08/11/17 14:58	10
4-Methyl-2-pentanone (MIBK)	100	U	100	7.1	ug/L			08/11/17 14:58	10
Styrene	10	U	10	2.3	ug/L			08/11/17 14:58	10
1,1,2,2-Tetrachloroethane	10	U *	10	3.2	ug/L			08/11/17 14:58	10
Tetrachloroethene	240		10	3.0	ug/L			08/11/17 14:58	10
Toluene	10	U	10	2.3	ug/L			08/11/17 14:58	10
Trichloroethene	10	U	10	3.3	ug/L			08/11/17 14:58	10
Vinyl chloride	10	U	10	4.5	ug/L			08/11/17 14:58	10
Xylenes, Total	20	U	20	2.4	ug/L			08/11/17 14:58	10
1,1,1-Trichloroethane	10	U	10	2.3	ug/L			08/11/17 14:58	10
1,1,2-Trichloroethane	10	U *	10	3.4	ug/L			08/11/17 14:58	10
Cyclohexane	10	U	10	4.4	ug/L			08/11/17 14:58	10
1,2-Dibromo-3-Chloropropane	20	U	20	4.7	ug/L			08/11/17 14:58	10
Ethylene Dibromide	10	U	10	2.3	ug/L			08/11/17 14:58	10
Dichlorodifluoromethane	10	U	10	5.0	ug/L			08/11/17 14:58	10
cis-1,2-Dichloroethene	10	U	10	3.0	ug/L			08/11/17 14:58	10
trans-1,2-Dichloroethene	10	U	10	2.9	ug/L			08/11/17 14:58	10
Isopropylbenzene	10	U	10	2.1	ug/L			08/11/17 14:58	10
Methyl acetate	100	U	100	14	ug/L			08/11/17 14:58	10
Methyl tert-butyl ether	10	U	10	2.7	ug/L			08/11/17 14:58	10
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	10	4.1	ug/L			08/11/17 14:58	10
1,2,4-Trichlorobenzene	10	U	10	2.7	ug/L			08/11/17 14:58	10
1,2-Dichlorobenzene	10	U	10	2.6	ug/L			08/11/17 14:58	10
1,3-Dichlorobenzene	10	U	10	3.2	ug/L			08/11/17 14:58	10
1,4-Dichlorobenzene	10	U	10	2.3	ug/L			08/11/17 14:58	10
Trichlorofluoromethane	10	U	10	5.0	ug/L			08/11/17 14:58	10
Chlorodibromomethane	10	U	10	2.5	ug/L			08/11/17 14:58	10
Methylcyclohexane	10	U	10	4.5	ug/L			08/11/17 14:58	10
Naphthalene	10	U	10	2.5	ug/L			08/11/17 14:58	10

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-50

Date Collected: 08/03/17 09:00

Date Received: 08/05/17 09:30

Lab Sample ID: 240-83317-1

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	108		61 - 138		08/11/17 14:58	10
4-Bromofluorobenzene (Surr)	76		69 - 120		08/11/17 14:58	10
Toluene-d8 (Surr)	109		73 - 120		08/11/17 14:58	10
Dibromofluoromethane (Surr)	104		69 - 124		08/11/17 14:58	10

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-51

Lab Sample ID: 240-83317-2

Date Collected: 08/03/17 10:05

Matrix: Water

Date Received: 08/05/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	500	U	500	88	ug/L			08/14/17 18:37	50
Benzene	50	U	50	14	ug/L			08/14/17 18:37	50
Dichlorobromomethane	50	U	50	15	ug/L			08/14/17 18:37	50
Bromoform	50	U	50	22	ug/L			08/14/17 18:37	50
Bromomethane	50	U	50	21	ug/L			08/14/17 18:37	50
2-Butanone (MEK)	500	U	500	51	ug/L			08/14/17 18:37	50
Carbon disulfide	50	U	50	17	ug/L			08/14/17 18:37	50
Carbon tetrachloride	50	U	50	18	ug/L			08/14/17 18:37	50
Chlorobenzene	50	U	50	16	ug/L			08/14/17 18:37	50
Chloroethane	50	U	50	21	ug/L			08/14/17 18:37	50
Chloroform	50	U	50	16	ug/L			08/14/17 18:37	50
Chloromethane	50	U	50	22	ug/L			08/14/17 18:37	50
1,1-Dichloroethane	50	U	50	13	ug/L			08/14/17 18:37	50
1,2-Dichloroethane	50	U	50	15	ug/L			08/14/17 18:37	50
1,1-Dichloroethene	50	U	50	14	ug/L			08/14/17 18:37	50
1,2-Dichloropropane	50	U	50	15	ug/L			08/14/17 18:37	50
cis-1,3-Dichloropropene	50	U	50	13	ug/L			08/14/17 18:37	50
trans-1,3-Dichloropropene	50	U	50	16	ug/L			08/14/17 18:37	50
Ethylbenzene	50	U	50	13	ug/L			08/14/17 18:37	50
2-Hexanone	500	U	500	62	ug/L			08/14/17 18:37	50
Methylene Chloride	50	U	50	27	ug/L			08/14/17 18:37	50
4-Methyl-2-pentanone (MIBK)	500	U	500	36	ug/L			08/14/17 18:37	50
Styrene	50	U	50	12	ug/L			08/14/17 18:37	50
1,1,2,2-Tetrachloroethane	50	U *	50	16	ug/L			08/14/17 18:37	50
Tetrachloroethene	1200		50	15	ug/L			08/14/17 18:37	50
Toluene	50	U	50	12	ug/L			08/14/17 18:37	50
Trichloroethene	17 J		50	17	ug/L			08/14/17 18:37	50
Vinyl chloride	50	U	50	23	ug/L			08/14/17 18:37	50
Xylenes, Total	100	U	100	12	ug/L			08/14/17 18:37	50
1,1,1-Trichloroethane	50	U	50	12	ug/L			08/14/17 18:37	50
1,1,2-Trichloroethane	50	U *	50	17	ug/L			08/14/17 18:37	50
Cyclohexane	50	U	50	22	ug/L			08/14/17 18:37	50
1,2-Dibromo-3-Chloropropane	100	U	100	24	ug/L			08/14/17 18:37	50
Ethylene Dibromide	50	U	50	12	ug/L			08/14/17 18:37	50
Dichlorodifluoromethane	50	U	50	25	ug/L			08/14/17 18:37	50
cis-1,2-Dichloroethene	26 J		50	15	ug/L			08/14/17 18:37	50
trans-1,2-Dichloroethene	45 J		50	15	ug/L			08/14/17 18:37	50
Isopropylbenzene	50	U	50	11	ug/L			08/14/17 18:37	50
Methyl acetate	500	U	500	72	ug/L			08/14/17 18:37	50
Methyl tert-butyl ether	50	U	50	14	ug/L			08/14/17 18:37	50
1,1,2-Trichloro-1,2,2-trifluoroethane	50	U	50	21	ug/L			08/14/17 18:37	50
1,2,4-Trichlorobenzene	50	U	50	14	ug/L			08/14/17 18:37	50
1,2-Dichlorobenzene	50	U	50	13	ug/L			08/14/17 18:37	50
1,3-Dichlorobenzene	50	U	50	16	ug/L			08/14/17 18:37	50
1,4-Dichlorobenzene	50	U	50	12	ug/L			08/14/17 18:37	50
Trichlorofluoromethane	50	U	50	25	ug/L			08/14/17 18:37	50
Chlorodibromomethane	50	U	50	13	ug/L			08/14/17 18:37	50
Methylcyclohexane	50	U	50	23	ug/L			08/14/17 18:37	50
Naphthalene	50	U	50	13	ug/L			08/14/17 18:37	50

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-51

Lab Sample ID: 240-83317-2

Date Collected: 08/03/17 10:05

Matrix: Water

Date Received: 08/05/17 09:30

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	106		61 - 138		08/14/17 18:37	50
4-Bromofluorobenzene (Surr)	76		69 - 120		08/14/17 18:37	50
Toluene-d8 (Surr)	104		73 - 120		08/14/17 18:37	50
Dibromofluoromethane (Surr)	103		69 - 124		08/14/17 18:37	50

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-52

Lab Sample ID: 240-83317-3

Date Collected: 08/03/17 10:55

Matrix: Water

Date Received: 08/05/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10000	U	10000	1800	ug/L			08/11/17 15:49	1000
Benzene	1000	U	1000	280	ug/L			08/11/17 15:49	1000
Dichlorobromomethane	1000	U	1000	300	ug/L			08/11/17 15:49	1000
Bromoform	1000	U	1000	430	ug/L			08/11/17 15:49	1000
Bromomethane	1000	U	1000	420	ug/L			08/11/17 15:49	1000
2-Butanone (MEK)	10000	U	10000	1000	ug/L			08/11/17 15:49	1000
Carbon disulfide	1000	U	1000	340	ug/L			08/11/17 15:49	1000
Carbon tetrachloride	1000	U	1000	350	ug/L			08/11/17 15:49	1000
Chlorobenzene	1000	U	1000	320	ug/L			08/11/17 15:49	1000
Chloroethane	1000	U	1000	410	ug/L			08/11/17 15:49	1000
Chloroform	1000	U	1000	310	ug/L			08/11/17 15:49	1000
Chloromethane	1000	U	1000	430	ug/L			08/11/17 15:49	1000
1,1-Dichloroethane	1000	U	1000	250	ug/L			08/11/17 15:49	1000
1,2-Dichloroethane	1000	U	1000	300	ug/L			08/11/17 15:49	1000
1,1-Dichloroethene	1000	U	1000	270	ug/L			08/11/17 15:49	1000
1,2-Dichloropropane	1000	U	1000	300	ug/L			08/11/17 15:49	1000
cis-1,3-Dichloropropene	1000	U	1000	260	ug/L			08/11/17 15:49	1000
trans-1,3-Dichloropropene	1000	U	1000	310	ug/L			08/11/17 15:49	1000
Ethylbenzene	1000	U	1000	260	ug/L			08/11/17 15:49	1000
2-Hexanone	10000	U	10000	1200	ug/L			08/11/17 15:49	1000
Methylene Chloride	1000	U	1000	530	ug/L			08/11/17 15:49	1000
4-Methyl-2-pentanone (MIBK)	10000	U	10000	710	ug/L			08/11/17 15:49	1000
Styrene	1000	U	1000	230	ug/L			08/11/17 15:49	1000
1,1,2,2-Tetrachloroethane	1000	U *	1000	320	ug/L			08/11/17 15:49	1000
Tetrachloroethene	40000		1000	300	ug/L			08/11/17 15:49	1000
Toluene	1000	U	1000	230	ug/L			08/11/17 15:49	1000
Trichloroethene	1000	U	1000	330	ug/L			08/11/17 15:49	1000
Vinyl chloride	1000	U	1000	450	ug/L			08/11/17 15:49	1000
Xylenes, Total	2000	U	2000	240	ug/L			08/11/17 15:49	1000
1,1,1-Trichloroethane	1000	U	1000	230	ug/L			08/11/17 15:49	1000
1,1,2-Trichloroethane	1000	U *	1000	340	ug/L			08/11/17 15:49	1000
Cyclohexane	1000	U	1000	440	ug/L			08/11/17 15:49	1000
1,2-Dibromo-3-Chloropropane	2000	U	2000	470	ug/L			08/11/17 15:49	1000
Ethylene Dibromide	1000	U	1000	230	ug/L			08/11/17 15:49	1000
Dichlorodifluoromethane	1000	U	1000	500	ug/L			08/11/17 15:49	1000
cis-1,2-Dichloroethene	1000	U	1000	300	ug/L			08/11/17 15:49	1000
trans-1,2-Dichloroethene	1000	U	1000	290	ug/L			08/11/17 15:49	1000
Isopropylbenzene	1000	U	1000	210	ug/L			08/11/17 15:49	1000
Methyl acetate	10000	U	10000	1400	ug/L			08/11/17 15:49	1000
Methyl tert-butyl ether	1000	U	1000	270	ug/L			08/11/17 15:49	1000
1,1,2-Trichloro-1,2,2-trifluoroethane	1000	U	1000	410	ug/L			08/11/17 15:49	1000
1,2,4-Trichlorobenzene	1000	U	1000	270	ug/L			08/11/17 15:49	1000
1,2-Dichlorobenzene	1000	U	1000	260	ug/L			08/11/17 15:49	1000
1,3-Dichlorobenzene	1000	U	1000	320	ug/L			08/11/17 15:49	1000
1,4-Dichlorobenzene	1000	U	1000	230	ug/L			08/11/17 15:49	1000
Trichlorofluoromethane	1000	U	1000	500	ug/L			08/11/17 15:49	1000
Chlorodibromomethane	1000	U	1000	250	ug/L			08/11/17 15:49	1000
Methylcyclohexane	1000	U	1000	450	ug/L			08/11/17 15:49	1000
Naphthalene	1000	U	1000	250	ug/L			08/11/17 15:49	1000

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-52

Date Collected: 08/03/17 10:55

Date Received: 08/05/17 09:30

Lab Sample ID: 240-83317-3

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	111		61 - 138		08/11/17 15:49	1000
4-Bromofluorobenzene (Surr)	77		69 - 120		08/11/17 15:49	1000
Toluene-d8 (Surr)	112		73 - 120		08/11/17 15:49	1000
Dibromofluoromethane (Surr)	108		69 - 124		08/11/17 15:49	1000

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-53

Lab Sample ID: 240-83317-4

Date Collected: 08/03/17 12:00

Matrix: Water

Date Received: 08/05/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	130	U	130	22	ug/L			08/11/17 16:12	12.5
Benzene	21		13	3.5	ug/L			08/11/17 16:12	12.5
Dichlorobromomethane	13	U	13	3.8	ug/L			08/11/17 16:12	12.5
Bromoform	13	U	13	5.4	ug/L			08/11/17 16:12	12.5
Bromomethane	13	U	13	5.3	ug/L			08/11/17 16:12	12.5
2-Butanone (MEK)	130	U	130	13	ug/L			08/11/17 16:12	12.5
Carbon disulfide	13	U	13	4.3	ug/L			08/11/17 16:12	12.5
Carbon tetrachloride	13	U	13	4.4	ug/L			08/11/17 16:12	12.5
Chlorobenzene	13	U	13	4.0	ug/L			08/11/17 16:12	12.5
Chloroethane	13	U	13	5.1	ug/L			08/11/17 16:12	12.5
Chloroform	13	U	13	3.9	ug/L			08/11/17 16:12	12.5
Chloromethane	13	U	13	5.4	ug/L			08/11/17 16:12	12.5
1,1-Dichloroethane	13	U	13	3.1	ug/L			08/11/17 16:12	12.5
1,2-Dichloroethane	13	U	13	3.8	ug/L			08/11/17 16:12	12.5
1,1-Dichloroethene	13	U	13	3.4	ug/L			08/11/17 16:12	12.5
1,2-Dichloropropane	13	U	13	3.8	ug/L			08/11/17 16:12	12.5
cis-1,3-Dichloropropene	13	U	13	3.3	ug/L			08/11/17 16:12	12.5
trans-1,3-Dichloropropene	13	U	13	3.9	ug/L			08/11/17 16:12	12.5
Ethylbenzene	13	U	13	3.3	ug/L			08/11/17 16:12	12.5
2-Hexanone	130	U	130	15	ug/L			08/11/17 16:12	12.5
Methylene Chloride	13	U	13	6.6	ug/L			08/11/17 16:12	12.5
4-Methyl-2-pentanone (MIBK)	130	U	130	8.9	ug/L			08/11/17 16:12	12.5
Styrene	13	U	13	2.9	ug/L			08/11/17 16:12	12.5
1,1,2,2-Tetrachloroethane	13	U *	13	4.0	ug/L			08/11/17 16:12	12.5
Tetrachloroethene	9.6	J	13	3.8	ug/L			08/11/17 16:12	12.5
Toluene	13	U	13	2.9	ug/L			08/11/17 16:12	12.5
Trichloroethene	13	U	13	4.1	ug/L			08/11/17 16:12	12.5
Vinyl chloride	150		13	5.6	ug/L			08/11/17 16:12	12.5
Xylenes, Total	25	U	25	3.0	ug/L			08/11/17 16:12	12.5
1,1,1-Trichloroethane	13	U	13	2.9	ug/L			08/11/17 16:12	12.5
1,1,2-Trichloroethane	13	U *	13	4.3	ug/L			08/11/17 16:12	12.5
Cyclohexane	13	U	13	5.5	ug/L			08/11/17 16:12	12.5
1,2-Dibromo-3-Chloropropane	25	U	25	5.9	ug/L			08/11/17 16:12	12.5
Ethylene Dibromide	13	U	13	2.9	ug/L			08/11/17 16:12	12.5
Dichlorodifluoromethane	13	U	13	6.3	ug/L			08/11/17 16:12	12.5
cis-1,2-Dichloroethene	380		13	3.8	ug/L			08/11/17 16:12	12.5
trans-1,2-Dichloroethene	63		13	3.6	ug/L			08/11/17 16:12	12.5
Isopropylbenzene	13	U	13	2.6	ug/L			08/11/17 16:12	12.5
Methyl acetate	130	U	130	18	ug/L			08/11/17 16:12	12.5
Methyl tert-butyl ether	13	U	13	3.4	ug/L			08/11/17 16:12	12.5
1,1,2-Trichloro-1,2,2-trifluoroethane	13	U	13	5.1	ug/L			08/11/17 16:12	12.5
1,2,4-Trichlorobenzene	13	U	13	3.4	ug/L			08/11/17 16:12	12.5
1,2-Dichlorobenzene	13	U	13	3.3	ug/L			08/11/17 16:12	12.5
1,3-Dichlorobenzene	13	U	13	4.0	ug/L			08/11/17 16:12	12.5
1,4-Dichlorobenzene	13	U	13	2.9	ug/L			08/11/17 16:12	12.5
Trichlorofluoromethane	13	U	13	6.3	ug/L			08/11/17 16:12	12.5
Chlorodibromomethane	13	U	13	3.1	ug/L			08/11/17 16:12	12.5
Methylcyclohexane	13	U	13	5.6	ug/L			08/11/17 16:12	12.5
Naphthalene	13	U	13	3.1	ug/L			08/11/17 16:12	12.5

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-53

Date Collected: 08/03/17 12:00

Date Received: 08/05/17 09:30

Lab Sample ID: 240-83317-4

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	110		61 - 138		08/11/17 16:12	12.5
4-Bromofluorobenzene (Surr)	80		69 - 120		08/11/17 16:12	12.5
Toluene-d8 (Surr)	113		73 - 120		08/11/17 16:12	12.5
Dibromofluoromethane (Surr)	107		69 - 124		08/11/17 16:12	12.5

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-54

Lab Sample ID: 240-83317-5

Date Collected: 08/03/17 13:00

Matrix: Water

Date Received: 08/05/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.6	J	20	3.5	ug/L			08/14/17 19:00	2
Benzene	32		2.0	0.56	ug/L			08/14/17 19:00	2
Dichlorobromomethane	2.0	U	2.0	0.60	ug/L			08/14/17 19:00	2
Bromoform	2.0	U	2.0	0.86	ug/L			08/14/17 19:00	2
Bromomethane	2.0	U	2.0	0.84	ug/L			08/14/17 19:00	2
2-Butanone (MEK)	20	U	20	2.0	ug/L			08/14/17 19:00	2
Carbon disulfide	2.0	U	2.0	0.68	ug/L			08/14/17 19:00	2
Carbon tetrachloride	2.0	U	2.0	0.70	ug/L			08/14/17 19:00	2
Chlorobenzene	2.0	U	2.0	0.64	ug/L			08/14/17 19:00	2
Chloroethane	2.0	U	2.0	0.82	ug/L			08/14/17 19:00	2
Chloroform	2.0	U	2.0	0.62	ug/L			08/14/17 19:00	2
Chloromethane	2.0	U	2.0	0.86	ug/L			08/14/17 19:00	2
1,1-Dichloroethane	2.0	U	2.0	0.50	ug/L			08/14/17 19:00	2
1,2-Dichloroethane	2.0	U	2.0	0.60	ug/L			08/14/17 19:00	2
1,1-Dichloroethene	2.0	U	2.0	0.54	ug/L			08/14/17 19:00	2
1,2-Dichloropropane	2.0	U	2.0	0.60	ug/L			08/14/17 19:00	2
cis-1,3-Dichloropropene	2.0	U	2.0	0.52	ug/L			08/14/17 19:00	2
trans-1,3-Dichloropropene	2.0	U	2.0	0.62	ug/L			08/14/17 19:00	2
Ethylbenzene	8.8		2.0	0.52	ug/L			08/14/17 19:00	2
2-Hexanone	20	U	20	2.5	ug/L			08/14/17 19:00	2
Methylene Chloride	2.0	U	2.0	1.1	ug/L			08/14/17 19:00	2
4-Methyl-2-pentanone (MIBK)	20	U	20	1.4	ug/L			08/14/17 19:00	2
Styrene	2.0	U	2.0	0.46	ug/L			08/14/17 19:00	2
1,1,2,2-Tetrachloroethane	2.0	U *	2.0	0.64	ug/L			08/14/17 19:00	2
Tetrachloroethene	22		2.0	0.60	ug/L			08/14/17 19:00	2
Toluene	0.89	J	2.0	0.46	ug/L			08/14/17 19:00	2
Trichloroethene	2.0	U	2.0	0.66	ug/L			08/14/17 19:00	2
Vinyl chloride	11		2.0	0.90	ug/L			08/14/17 19:00	2
Xylenes, Total	8.1		4.0	0.48	ug/L			08/14/17 19:00	2
1,1,1-Trichloroethane	2.0	U	2.0	0.46	ug/L			08/14/17 19:00	2
1,1,2-Trichloroethane	2.0	U *	2.0	0.68	ug/L			08/14/17 19:00	2
Cyclohexane	2.0	U	2.0	0.88	ug/L			08/14/17 19:00	2
1,2-Dibromo-3-Chloropropane	4.0	U	4.0	0.94	ug/L			08/14/17 19:00	2
Ethylene Dibromide	2.0	U	2.0	0.46	ug/L			08/14/17 19:00	2
Dichlorodifluoromethane	2.0	U	2.0	1.0	ug/L			08/14/17 19:00	2
cis-1,2-Dichloroethene	48		2.0	0.60	ug/L			08/14/17 19:00	2
trans-1,2-Dichloroethene	7.0		2.0	0.58	ug/L			08/14/17 19:00	2
Isopropylbenzene	1.7	J	2.0	0.42	ug/L			08/14/17 19:00	2
Methyl acetate	20	U	20	2.9	ug/L			08/14/17 19:00	2
Methyl tert-butyl ether	2.0	U	2.0	0.54	ug/L			08/14/17 19:00	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0	0.82	ug/L			08/14/17 19:00	2
1,2,4-Trichlorobenzene	2.0	U	2.0	0.54	ug/L			08/14/17 19:00	2
1,2-Dichlorobenzene	2.0	U	2.0	0.52	ug/L			08/14/17 19:00	2
1,3-Dichlorobenzene	2.0	U	2.0	0.64	ug/L			08/14/17 19:00	2
1,4-Dichlorobenzene	2.0	U	2.0	0.46	ug/L			08/14/17 19:00	2
Trichlorofluoromethane	2.0	U	2.0	1.0	ug/L			08/14/17 19:00	2
Chlorodibromomethane	2.0	U	2.0	0.50	ug/L			08/14/17 19:00	2
Methylcyclohexane	2.0	U	2.0	0.90	ug/L			08/14/17 19:00	2
Naphthalene	25		2.0	0.50	ug/L			08/14/17 19:00	2

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-54

Date Collected: 08/03/17 13:00

Date Received: 08/05/17 09:30

Lab Sample ID: 240-83317-5

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	108		61 - 138		08/14/17 19:00	2
4-Bromofluorobenzene (Surr)	88		69 - 120		08/14/17 19:00	2
Toluene-d8 (Surr)	111		73 - 120		08/14/17 19:00	2
Dibromofluoromethane (Surr)	105		69 - 124		08/14/17 19:00	2

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-55

Lab Sample ID: 240-83317-6

Date Collected: 08/03/17 15:30

Matrix: Water

Date Received: 08/05/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	1300	U	1300	220	ug/L			08/11/17 16:58	125
Benzene	130	U	130	35	ug/L			08/11/17 16:58	125
Dichlorobromomethane	130	U	130	38	ug/L			08/11/17 16:58	125
Bromoform	130	U	130	54	ug/L			08/11/17 16:58	125
Bromomethane	130	U	130	53	ug/L			08/11/17 16:58	125
2-Butanone (MEK)	1300	U	1300	130	ug/L			08/11/17 16:58	125
Carbon disulfide	130	U	130	43	ug/L			08/11/17 16:58	125
Carbon tetrachloride	130	U	130	44	ug/L			08/11/17 16:58	125
Chlorobenzene	130	U	130	40	ug/L			08/11/17 16:58	125
Chloroethane	130	U	130	51	ug/L			08/11/17 16:58	125
Chloroform	130	U	130	39	ug/L			08/11/17 16:58	125
Chloromethane	130	U	130	54	ug/L			08/11/17 16:58	125
1,1-Dichloroethane	130	U	130	31	ug/L			08/11/17 16:58	125
1,2-Dichloroethane	130	U	130	38	ug/L			08/11/17 16:58	125
1,1-Dichloroethene	130	U	130	34	ug/L			08/11/17 16:58	125
1,2-Dichloropropane	130	U	130	38	ug/L			08/11/17 16:58	125
cis-1,3-Dichloropropene	130	U	130	33	ug/L			08/11/17 16:58	125
trans-1,3-Dichloropropene	130	U	130	39	ug/L			08/11/17 16:58	125
Ethylbenzene	130	U	130	33	ug/L			08/11/17 16:58	125
2-Hexanone	1300	U	1300	150	ug/L			08/11/17 16:58	125
Methylene Chloride	130	U	130	66	ug/L			08/11/17 16:58	125
4-Methyl-2-pentanone (MIBK)	1300	U	1300	89	ug/L			08/11/17 16:58	125
Styrene	130	U	130	29	ug/L			08/11/17 16:58	125
1,1,2,2-Tetrachloroethane	130	U *	130	40	ug/L			08/11/17 16:58	125
Tetrachloroethene	550		130	38	ug/L			08/11/17 16:58	125
Toluene	130	U	130	29	ug/L			08/11/17 16:58	125
Trichloroethene	180		130	41	ug/L			08/11/17 16:58	125
Vinyl chloride	200		130	56	ug/L			08/11/17 16:58	125
Xylenes, Total	250	U	250	30	ug/L			08/11/17 16:58	125
1,1,1-Trichloroethane	130	U	130	29	ug/L			08/11/17 16:58	125
1,1,2-Trichloroethane	130	U *	130	43	ug/L			08/11/17 16:58	125
Cyclohexane	130	U	130	55	ug/L			08/11/17 16:58	125
1,2-Dibromo-3-Chloropropane	250	U	250	59	ug/L			08/11/17 16:58	125
Ethylene Dibromide	130	U	130	29	ug/L			08/11/17 16:58	125
Dichlorodifluoromethane	130	U	130	63	ug/L			08/11/17 16:58	125
cis-1,2-Dichloroethene	3100		130	38	ug/L			08/11/17 16:58	125
trans-1,2-Dichloroethene	84 J		130	36	ug/L			08/11/17 16:58	125
Isopropylbenzene	130	U	130	26	ug/L			08/11/17 16:58	125
Methyl acetate	1300	U	1300	180	ug/L			08/11/17 16:58	125
Methyl tert-butyl ether	130	U	130	34	ug/L			08/11/17 16:58	125
1,1,2-Trichloro-1,2,2-trifluoroethane	130	U	130	51	ug/L			08/11/17 16:58	125
1,2,4-Trichlorobenzene	130	U	130	34	ug/L			08/11/17 16:58	125
1,2-Dichlorobenzene	130	U	130	33	ug/L			08/11/17 16:58	125
1,3-Dichlorobenzene	130	U	130	40	ug/L			08/11/17 16:58	125
1,4-Dichlorobenzene	130	U	130	29	ug/L			08/11/17 16:58	125
Trichlorofluoromethane	130	U	130	63	ug/L			08/11/17 16:58	125
Chlorodibromomethane	130	U	130	31	ug/L			08/11/17 16:58	125
Methylcyclohexane	130	U	130	56	ug/L			08/11/17 16:58	125
Naphthalene	64 J		130	31	ug/L			08/11/17 16:58	125

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-55

Lab Sample ID: 240-83317-6

Date Collected: 08/03/17 15:30

Matrix: Water

Date Received: 08/05/17 09:30

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	110		61 - 138		08/11/17 16:58	125
4-Bromofluorobenzene (Surr)	79		69 - 120		08/11/17 16:58	125
Toluene-d8 (Surr)	116		73 - 120		08/11/17 16:58	125
Dibromofluoromethane (Surr)	107		69 - 124		08/11/17 16:58	125

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: S-170804-RA-19

Lab Sample ID: 240-83317-7

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Percent Solids: 99.2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25	U	25	3.9	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Benzene	6.4	U	6.4	0.41	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Dichlorobromomethane	6.4	U	6.4	0.42	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Bromoform	6.4	U	6.4	0.51	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Bromomethane	6.4	U	6.4	0.75	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
2-Butanone (MEK)	25	U	25	1.6	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Carbon disulfide	6.4	U	6.4	0.27	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Carbon tetrachloride	6.4	U	6.4	0.32	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Chlorobenzene	6.4	U	6.4	0.42	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Chloroethane	6.4	U	6.4	0.48	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Chloroform	6.4	U	6.4	0.29	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Chloromethane	6.4	U	6.4	0.48	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,1-Dichloroethane	6.4	U	6.4	0.42	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,2-Dichloroethane	6.4	U	6.4	0.37	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,1-Dichloroethene	6.4	U	6.4	0.69	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,2-Dichloropropane	6.4	U	6.4	0.39	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
cis-1,3-Dichloropropene	6.4	U	6.4	0.33	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
trans-1,3-Dichloropropene	6.4	U	6.4	0.27	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Ethylbenzene	6.4	U	6.4	0.34	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
2-Hexanone	25	U	25	0.74	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Methylene Chloride	3.7	J B	6.4	0.31	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
4-Methyl-2-pentanone (MIBK)	25	U	25	1.1	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Styrene	6.4	U	6.4	0.34	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,1,2,2-Tetrachloroethane	6.4	U *	6.4	0.33	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Tetrachloroethene	8.9		6.4	0.47	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Toluene	6.4	U	6.4	0.43	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Trichloroethene	6.4	U	6.4	0.52	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Vinyl chloride	6.4	U	6.4	0.36	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Xylenes, Total	13	U	13	0.51	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,1,1-Trichloroethane	6.4	U	6.4	0.29	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,1,2-Trichloroethane	6.4	U	6.4	0.50	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Cyclohexane	13	U	13	0.27	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,2-Dibromo-3-Chloropropane	13	U	13	0.87	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Ethylene Dibromide	6.4	U	6.4	0.45	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Dichlorodifluoromethane	6.4	U	6.4	0.45	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
cis-1,2-Dichloroethene	6.4	U	6.4	0.36	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
trans-1,2-Dichloroethene	6.4	U	6.4	0.48	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Isopropylbenzene	6.4	U	6.4	0.25	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Methyl acetate	32	U	32	1.5	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Methyl tert-butyl ether	6.4	U	6.4	0.34	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	6.4	U	6.4	0.62	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,2,4-Trichlorobenzene	6.4	U	6.4	0.31	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,2-Dichlorobenzene	6.4	U	6.4	0.28	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,3-Dichlorobenzene	6.4	U	6.4	0.37	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
1,4-Dichlorobenzene	6.4	U	6.4	0.45	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Trichlorofluoromethane	6.4	U	6.4	0.31	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Chlorodibromomethane	6.4	U	6.4	0.38	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Methylcyclohexane	13	U	13	0.29	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1
Naphthalene	0.80	J	6.4	0.42	ug/Kg	☼	08/05/17 13:00	08/09/17 21:32	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: S-170804-RA-19

Lab Sample ID: 240-83317-7

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Percent Solids: 99.2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		61 - 127	08/05/17 13:00	08/09/17 21:32	1
4-Bromofluorobenzene (Surr)	83		61 - 132	08/05/17 13:00	08/09/17 21:32	1
Toluene-d8 (Surr)	74		66 - 125	08/05/17 13:00	08/09/17 21:32	1
Dibromofluoromethane (Surr)	76		43 - 131	08/05/17 13:00	08/09/17 21:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	99.2		0.1	0.1	%			08/07/17 09:32	1
Percent Moisture	0.8		0.1	0.1	%			08/07/17 09:32	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: S-170804-RA-20

Lab Sample ID: 240-83317-8

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Percent Solids: 99.6

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	19	*	15	2.3	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Benzene	3.7	U	3.7	0.24	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Dichlorobromomethane	3.7	U	3.7	0.24	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Bromoform	3.7	U	3.7	0.29	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Bromomethane	3.7	U	3.7	0.43	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
2-Butanone (MEK)	15	U	15	0.93	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Carbon disulfide	3.7	U	3.7	0.15	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Carbon tetrachloride	3.7	U	3.7	0.18	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Chlorobenzene	3.7	U	3.7	0.24	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Chloroethane	3.7	U	3.7	0.28	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Chloroform	3.7	U	3.7	0.17	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Chloromethane	3.7	U	3.7	0.28	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,1-Dichloroethane	3.7	U	3.7	0.24	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,2-Dichloroethane	3.7	U	3.7	0.21	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,1-Dichloroethene	3.7	U	3.7	0.40	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,2-Dichloropropane	3.7	U	3.7	0.23	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
cis-1,3-Dichloropropene	3.7	U	3.7	0.19	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
trans-1,3-Dichloropropene	3.7	U	3.7	0.15	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Ethylbenzene	3.7	U	3.7	0.20	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
2-Hexanone	0.81	J	15	0.43	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Methylene Chloride	0.55	J	3.7	0.18	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
4-Methyl-2-pentanone (MIBK)	1.9	J	15	0.65	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Styrene	3.7	U	3.7	0.20	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,1,2,2-Tetrachloroethane	3.7	U	3.7	0.19	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Tetrachloroethene	3.7	U	3.7	0.27	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Toluene	3.7	U	3.7	0.25	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Trichloroethene	3.7	U	3.7	0.30	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Vinyl chloride	3.7	U	3.7	0.21	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Xylenes, Total	7.4	U	7.4	0.29	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,1,1-Trichloroethane	3.7	U	3.7	0.17	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,1,2-Trichloroethane	3.7	U	3.7	0.29	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Cyclohexane	7.4	U	7.4	0.15	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,2-Dibromo-3-Chloropropane	7.4	U	7.4	0.50	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Ethylene Dibromide	3.7	U	3.7	0.26	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Dichlorodifluoromethane	3.7	U	3.7	0.26	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
cis-1,2-Dichloroethene	3.7	U	3.7	0.21	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
trans-1,2-Dichloroethene	3.7	U	3.7	0.28	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Isopropylbenzene	3.7	U	3.7	0.15	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Methyl acetate	18	U	18	0.86	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Methyl tert-butyl ether	3.7	U	3.7	0.20	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	3.7	U	3.7	0.36	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,2,4-Trichlorobenzene	3.7	U	3.7	0.18	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,2-Dichlorobenzene	3.7	U	3.7	0.16	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,3-Dichlorobenzene	3.7	U	3.7	0.21	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
1,4-Dichlorobenzene	3.7	U	3.7	0.26	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Trichlorofluoromethane	3.7	U	3.7	0.18	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Chlorodibromomethane	3.7	U	3.7	0.22	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Methylcyclohexane	7.4	U	7.4	0.17	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1
Naphthalene	0.46	J	3.7	0.24	ug/Kg	☼	08/05/17 13:00	08/10/17 12:20	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: S-170804-RA-20

Lab Sample ID: 240-83317-8

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Percent Solids: 99.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		61 - 127	08/05/17 13:00	08/10/17 12:20	1
4-Bromofluorobenzene (Surr)	92		61 - 132	08/05/17 13:00	08/10/17 12:20	1
Toluene-d8 (Surr)	96		66 - 125	08/05/17 13:00	08/10/17 12:20	1
Dibromofluoromethane (Surr)	88		43 - 131	08/05/17 13:00	08/10/17 12:20	1

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	99.6		0.1	0.1	%			08/07/17 09:41	1
Percent Moisture	0.4		0.1	0.1	%			08/07/17 09:41	1



Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: S-170804-RA-21

Lab Sample ID: 240-83317-9

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Percent Solids: 96.3

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	21	U *	21	3.3	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Benzene	5.4	U	5.4	0.34	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Dichlorobromomethane	5.4	U	5.4	0.35	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Bromoform	5.4	U	5.4	0.43	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Bromomethane	5.4	U	5.4	0.63	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
2-Butanone (MEK)	21	U	21	1.4	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Carbon disulfide	5.4	U	5.4	0.23	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Carbon tetrachloride	5.4	U	5.4	0.27	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Chlorobenzene	5.4	U	5.4	0.35	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Chloroethane	5.4	U	5.4	0.41	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Chloroform	5.4	U	5.4	0.25	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Chloromethane	5.4	U	5.4	0.41	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,1-Dichloroethane	5.4	U	5.4	0.35	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,2-Dichloroethane	5.4	U	5.4	0.31	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,1-Dichloroethene	5.4	U	5.4	0.58	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,2-Dichloropropane	5.4	U	5.4	0.33	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
cis-1,3-Dichloropropene	5.4	U	5.4	0.28	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
trans-1,3-Dichloropropene	5.4	U	5.4	0.23	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Ethylbenzene	5.4	U	5.4	0.29	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
2-Hexanone	21	U	21	0.62	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Methylene Chloride	5.4	U	5.4	0.26	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
4-Methyl-2-pentanone (MIBK)	21	U	21	0.96	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Styrene	5.4	U	5.4	0.29	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,1,2,2-Tetrachloroethane	5.4	U	5.4	0.28	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Tetrachloroethene	2.1	J	5.4	0.40	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Toluene	0.39	J	5.4	0.36	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Trichloroethene	5.4	U	5.4	0.44	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Vinyl chloride	5.4	U	5.4	0.30	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Xylenes, Total	11	U	11	0.43	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,1,1-Trichloroethane	5.4	U	5.4	0.25	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,1,2-Trichloroethane	5.4	U	5.4	0.42	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Cyclohexane	11	U	11	0.23	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,2-Dibromo-3-Chloropropane	11	U	11	0.73	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Ethylene Dibromide	5.4	U	5.4	0.38	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Dichlorodifluoromethane	5.4	U	5.4	0.38	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
cis-1,2-Dichloroethene	5.4	U	5.4	0.30	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
trans-1,2-Dichloroethene	5.4	U	5.4	0.41	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Isopropylbenzene	5.4	U	5.4	0.21	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Methyl acetate	27	U	27	1.3	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Methyl tert-butyl ether	5.4	U	5.4	0.29	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.4	U	5.4	0.53	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,2,4-Trichlorobenzene	5.4	U	5.4	0.26	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,2-Dichlorobenzene	5.4	U	5.4	0.24	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,3-Dichlorobenzene	5.4	U	5.4	0.31	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
1,4-Dichlorobenzene	5.4	U	5.4	0.38	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Trichlorofluoromethane	5.4	U	5.4	0.26	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Chlorodibromomethane	5.4	U	5.4	0.32	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Methylcyclohexane	11	U	11	0.25	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1
Naphthalene	5.4	U	5.4	0.35	ug/Kg	☼	08/05/17 13:00	08/10/17 12:41	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: S-170804-RA-21

Lab Sample ID: 240-83317-9

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Percent Solids: 96.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		61 - 127	08/05/17 13:00	08/10/17 12:41	1
4-Bromofluorobenzene (Surr)	91		61 - 132	08/05/17 13:00	08/10/17 12:41	1
Toluene-d8 (Surr)	96		66 - 125	08/05/17 13:00	08/10/17 12:41	1
Dibromofluoromethane (Surr)	88		43 - 131	08/05/17 13:00	08/10/17 12:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96.3		0.1	0.1	%			08/07/17 09:41	1
Percent Moisture	3.7		0.1	0.1	%			08/07/17 09:41	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83317-10

Date Collected: 08/03/17 00:00

Matrix: Water

Date Received: 08/05/17 09:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/11/17 17:20	1
Benzene	1.0	U	1.0	0.28	ug/L			08/11/17 17:20	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/11/17 17:20	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/11/17 17:20	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/11/17 17:20	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/11/17 17:20	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/11/17 17:20	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/11/17 17:20	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/11/17 17:20	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/11/17 17:20	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/11/17 17:20	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/11/17 17:20	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/11/17 17:20	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/11/17 17:20	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/11/17 17:20	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/11/17 17:20	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/11/17 17:20	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/11/17 17:20	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/11/17 17:20	1
2-Hexanone	10	U	10	1.2	ug/L			08/11/17 17:20	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/11/17 17:20	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/11/17 17:20	1
Styrene	1.0	U	1.0	0.23	ug/L			08/11/17 17:20	1
1,1,2,2-Tetrachloroethane	1.0	U *	1.0	0.32	ug/L			08/11/17 17:20	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/11/17 17:20	1
Toluene	1.0	U	1.0	0.23	ug/L			08/11/17 17:20	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/11/17 17:20	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/11/17 17:20	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/11/17 17:20	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/11/17 17:20	1
1,1,2-Trichloroethane	1.0	U *	1.0	0.34	ug/L			08/11/17 17:20	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/11/17 17:20	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/11/17 17:20	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/11/17 17:20	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/11/17 17:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/11/17 17:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/11/17 17:20	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/11/17 17:20	1
Methyl acetate	10	U	10	1.4	ug/L			08/11/17 17:20	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/11/17 17:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/11/17 17:20	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/11/17 17:20	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/11/17 17:20	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/11/17 17:20	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/11/17 17:20	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/11/17 17:20	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/11/17 17:20	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/11/17 17:20	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/11/17 17:20	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83317-10

Date Collected: 08/03/17 00:00

Matrix: Water

Date Received: 08/05/17 09:30

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	109		61 - 138		08/11/17 17:20	1
4-Bromofluorobenzene (Surr)	79		69 - 120		08/11/17 17:20	1
Toluene-d8 (Surr)	116		73 - 120		08/11/17 17:20	1
Dibromofluoromethane (Surr)	108		69 - 124		08/11/17 17:20	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (61-127)	BFB (61-132)	TOL (66-125)	DBFM (43-131)
240-83317-7	S-170804-RA-19	82	83	74	76
240-83317-8	S-170804-RA-20	88	92	96	88
240-83317-9	S-170804-RA-21	88	91	96	88
LCS 240-290464/5	Lab Control Sample	75	89	76	79
LCS 240-290567/6	Lab Control Sample	89	92	96	95
MB 240-289903/1-A	Method Blank	84	91	94	87
MB 240-290464/6	Method Blank	79	90	77	76

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (61-138)	BFB (69-120)	TOL (73-120)	DBFM (69-124)
240-83317-1	W-170803-RA-50	108	76	109	104
240-83317-2	W-170803-RA-51	106	76	104	103
240-83317-3	W-170803-RA-52	111	77	112	108
240-83317-4	W-170803-RA-53	110	80	113	107
240-83317-5	W-170803-RA-54	108	88	111	105
240-83317-6	W-170803-RA-55	110	79	116	107
240-83317-10	TRIP BLANK	109	79	116	108
LCS 240-290805/4	Lab Control Sample	110	89	117	104
LCS 240-291021/4	Lab Control Sample	107	87	116	103
MB 240-290805/6	Method Blank	105	77	107	100
MB 240-291021/6	Method Blank	108	79	109	104

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-289903/1-A

Matrix: Solid

Analysis Batch: 290567

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 289903

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	20	U	20	3.1	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Benzene	5.0	U	5.0	0.32	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Dichlorobromomethane	5.0	U	5.0	0.33	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Bromoform	5.0	U	5.0	0.40	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Bromomethane	5.0	U	5.0	0.59	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
2-Butanone (MEK)	20	U	20	1.3	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Carbon disulfide	5.0	U	5.0	0.21	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Carbon tetrachloride	5.0	U	5.0	0.25	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Chloroethane	5.0	U	5.0	0.38	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Chloroform	5.0	U	5.0	0.23	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Chloromethane	5.0	U	5.0	0.38	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,1-Dichloroethane	5.0	U	5.0	0.33	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,2-Dichloroethane	5.0	U	5.0	0.29	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,1-Dichloroethene	5.0	U	5.0	0.54	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,2-Dichloropropane	5.0	U	5.0	0.31	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.26	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.21	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Ethylbenzene	5.0	U	5.0	0.27	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
2-Hexanone	20	U	20	0.58	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Methylene Chloride	5.0	U	5.0	0.24	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
4-Methyl-2-pentanone (MIBK)	20	U	20	0.89	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Styrene	5.0	U	5.0	0.27	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.26	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Tetrachloroethene	5.0	U	5.0	0.37	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Toluene	5.0	U	5.0	0.34	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Trichloroethene	5.0	U	5.0	0.41	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Vinyl chloride	5.0	U	5.0	0.28	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Xylenes, Total	10	U	10	0.40	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,1,1-Trichloroethane	5.0	U	5.0	0.23	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Cyclohexane	10	U	10	0.21	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,2-Dibromo-3-Chloropropane	10	U	10	0.68	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Ethylene Dibromide	5.0	U	5.0	0.35	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Dichlorodifluoromethane	5.0	U	5.0	0.35	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
cis-1,2-Dichloroethene	5.0	U	5.0	0.28	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.38	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Isopropylbenzene	5.0	U	5.0	0.20	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Methyl acetate	25	U	25	1.2	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Methyl tert-butyl ether	5.0	U	5.0	0.27	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	0.49	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,2,4-Trichlorobenzene	0.271	J	5.0	0.24	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,2-Dichlorobenzene	5.0	U	5.0	0.22	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,3-Dichlorobenzene	5.0	U	5.0	0.29	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
1,4-Dichlorobenzene	5.0	U	5.0	0.35	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Trichlorofluoromethane	5.0	U	5.0	0.24	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Chlorodibromomethane	5.0	U	5.0	0.30	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Methylcyclohexane	10	U	10	0.23	ug/Kg		08/03/17 16:48	08/10/17 10:12	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-289903/1-A
Matrix: Solid
Analysis Batch: 290567

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 289903

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	5.0	U	5.0	0.33	ug/Kg		08/03/17 16:48	08/10/17 10:12	1
Surrogate									
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		61 - 127				08/03/17 16:48	08/10/17 10:12	1
4-Bromofluorobenzene (Surr)	91		61 - 132				08/03/17 16:48	08/10/17 10:12	1
Toluene-d8 (Surr)	94		66 - 125				08/03/17 16:48	08/10/17 10:12	1
Dibromofluoromethane (Surr)	87		43 - 131				08/03/17 16:48	08/10/17 10:12	1

Lab Sample ID: MB 240-290464/6
Matrix: Solid
Analysis Batch: 290464

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20	U	20	3.1	ug/Kg			08/09/17 11:32	1
Benzene	5.0	U	5.0	0.32	ug/Kg			08/09/17 11:32	1
Dichlorobromomethane	5.0	U	5.0	0.33	ug/Kg			08/09/17 11:32	1
Bromoform	5.0	U	5.0	0.40	ug/Kg			08/09/17 11:32	1
Bromomethane	5.0	U	5.0	0.59	ug/Kg			08/09/17 11:32	1
2-Butanone (MEK)	20	U	20	1.3	ug/Kg			08/09/17 11:32	1
Carbon disulfide	5.0	U	5.0	0.21	ug/Kg			08/09/17 11:32	1
Carbon tetrachloride	5.0	U	5.0	0.25	ug/Kg			08/09/17 11:32	1
Chlorobenzene	5.0	U	5.0	0.33	ug/Kg			08/09/17 11:32	1
Chloroethane	5.0	U	5.0	0.38	ug/Kg			08/09/17 11:32	1
Chloroform	5.0	U	5.0	0.23	ug/Kg			08/09/17 11:32	1
Chloromethane	5.0	U	5.0	0.38	ug/Kg			08/09/17 11:32	1
1,1-Dichloroethane	5.0	U	5.0	0.33	ug/Kg			08/09/17 11:32	1
1,2-Dichloroethane	5.0	U	5.0	0.29	ug/Kg			08/09/17 11:32	1
1,1-Dichloroethene	5.0	U	5.0	0.54	ug/Kg			08/09/17 11:32	1
1,2-Dichloropropane	5.0	U	5.0	0.31	ug/Kg			08/09/17 11:32	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.26	ug/Kg			08/09/17 11:32	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.21	ug/Kg			08/09/17 11:32	1
Ethylbenzene	5.0	U	5.0	0.27	ug/Kg			08/09/17 11:32	1
2-Hexanone	20	U	20	0.58	ug/Kg			08/09/17 11:32	1
Methylene Chloride	3.08	J	5.0	0.24	ug/Kg			08/09/17 11:32	1
4-Methyl-2-pentanone (MIBK)	20	U	20	0.89	ug/Kg			08/09/17 11:32	1
Styrene	5.0	U	5.0	0.27	ug/Kg			08/09/17 11:32	1
1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.26	ug/Kg			08/09/17 11:32	1
Tetrachloroethene	5.0	U	5.0	0.37	ug/Kg			08/09/17 11:32	1
Toluene	5.0	U	5.0	0.34	ug/Kg			08/09/17 11:32	1
Trichloroethene	5.0	U	5.0	0.41	ug/Kg			08/09/17 11:32	1
Vinyl chloride	5.0	U	5.0	0.28	ug/Kg			08/09/17 11:32	1
Xylenes, Total	10	U	10	0.40	ug/Kg			08/09/17 11:32	1
1,1,1-Trichloroethane	5.0	U	5.0	0.23	ug/Kg			08/09/17 11:32	1
1,1,2-Trichloroethane	5.0	U	5.0	0.39	ug/Kg			08/09/17 11:32	1
Cyclohexane	10	U	10	0.21	ug/Kg			08/09/17 11:32	1
1,2-Dibromo-3-Chloropropane	10	U	10	0.68	ug/Kg			08/09/17 11:32	1
Ethylene Dibromide	5.0	U	5.0	0.35	ug/Kg			08/09/17 11:32	1
Dichlorodifluoromethane	5.0	U	5.0	0.35	ug/Kg			08/09/17 11:32	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-290464/6
Matrix: Solid
Analysis Batch: 290464

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
cis-1,2-Dichloroethene	5.0	U	5.0	0.28	ug/Kg			08/09/17 11:32	1
trans-1,2-Dichloroethene	5.0	U	5.0	0.38	ug/Kg			08/09/17 11:32	1
Isopropylbenzene	5.0	U	5.0	0.20	ug/Kg			08/09/17 11:32	1
Methyl acetate	25	U	25	1.2	ug/Kg			08/09/17 11:32	1
Methyl tert-butyl ether	5.0	U	5.0	0.27	ug/Kg			08/09/17 11:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U	5.0	0.49	ug/Kg			08/09/17 11:32	1
1,2,4-Trichlorobenzene	5.0	U	5.0	0.24	ug/Kg			08/09/17 11:32	1
1,2-Dichlorobenzene	5.0	U	5.0	0.22	ug/Kg			08/09/17 11:32	1
1,3-Dichlorobenzene	5.0	U	5.0	0.29	ug/Kg			08/09/17 11:32	1
1,4-Dichlorobenzene	5.0	U	5.0	0.35	ug/Kg			08/09/17 11:32	1
Trichlorofluoromethane	5.0	U	5.0	0.24	ug/Kg			08/09/17 11:32	1
Chlorodibromomethane	5.0	U	5.0	0.30	ug/Kg			08/09/17 11:32	1
Methylcyclohexane	10	U	10	0.23	ug/Kg			08/09/17 11:32	1
Naphthalene	5.0	U	5.0	0.33	ug/Kg			08/09/17 11:32	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	79		61 - 127		08/09/17 11:32	1
4-Bromofluorobenzene (Surr)	90		61 - 132		08/09/17 11:32	1
Toluene-d8 (Surr)	77		66 - 125		08/09/17 11:32	1
Dibromofluoromethane (Surr)	76		43 - 131		08/09/17 11:32	1

Lab Sample ID: LCS 240-290464/5
Matrix: Solid
Analysis Batch: 290464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	51.9		ug/Kg		104	77 - 120
Dichlorobromomethane	50.0	54.7		ug/Kg		109	61 - 132
Bromoform	50.0	45.5		ug/Kg		91	40 - 140
Bromomethane	20.0	16.8		ug/Kg		84	10 - 153
2-Butanone (MEK)	100	84.1		ug/Kg		84	51 - 120
Carbon disulfide	50.0	47.1		ug/Kg		94	17 - 163
Carbon tetrachloride	50.0	54.7		ug/Kg		109	43 - 144
Chlorobenzene	50.0	50.4		ug/Kg		101	76 - 120
Chloroethane	20.0	15.3		ug/Kg		77	10 - 166
Chloroform	50.0	51.1		ug/Kg		102	74 - 120
Chloromethane	20.0	18.9		ug/Kg		95	41 - 124
1,1-Dichloroethane	50.0	54.7		ug/Kg		109	72 - 120
1,2-Dichloroethane	50.0	47.4		ug/Kg		95	71 - 120
1,1-Dichloroethene	50.0	39.1		ug/Kg		78	58 - 130
1,2-Dichloropropane	50.0	58.1		ug/Kg		116	78 - 122
cis-1,3-Dichloropropene	50.0	58.1		ug/Kg		116	66 - 126
trans-1,3-Dichloropropene	50.0	44.9		ug/Kg		90	55 - 121
Ethylbenzene	50.0	52.4		ug/Kg		105	76 - 120
2-Hexanone	100	101		ug/Kg		101	52 - 129
Methylene Chloride	50.0	53.8		ug/Kg		108	64 - 126
4-Methyl-2-pentanone (MIBK)	100	94.7		ug/Kg		95	65 - 131

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290464/5

Matrix: Solid

Analysis Batch: 290464

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Styrene	50.0	50.3		ug/Kg		101	80 - 120
1,1,2,2-Tetrachloroethane	50.0	62.4	*	ug/Kg		125	78 - 120
Tetrachloroethene	50.0	49.8		ug/Kg		100	68 - 122
Toluene	50.0	49.5		ug/Kg		99	74 - 120
Trichloroethene	50.0	44.8		ug/Kg		90	73 - 123
Vinyl chloride	20.0	17.5		ug/Kg		87	49 - 131
Xylenes, Total	100	108		ug/Kg		108	78 - 120
1,1,1-Trichloroethane	50.0	57.1		ug/Kg		114	60 - 136
1,1,2-Trichloroethane	50.0	47.9		ug/Kg		96	80 - 120
Cyclohexane	50.0	61.0		ug/Kg		122	66 - 129
1,2-Dibromo-3-Chloropropane	50.0	51.8		ug/Kg		104	40 - 133
Ethylene Dibromide	50.0	49.3		ug/Kg		99	80 - 120
Dichlorodifluoromethane	20.0	17.5		ug/Kg		88	15 - 127
cis-1,2-Dichloroethene	50.0	51.5		ug/Kg		103	78 - 120
trans-1,2-Dichloroethene	50.0	54.4		ug/Kg		109	74 - 124
Isopropylbenzene	50.0	55.6		ug/Kg		111	76 - 124
Methyl acetate	100	97.7		ug/Kg		98	63 - 126
Methyl tert-butyl ether	50.0	53.6		ug/Kg		107	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	38.4		ug/Kg		77	64 - 125
1,2,4-Trichlorobenzene	50.0	46.6		ug/Kg		93	60 - 124
1,2-Dichlorobenzene	50.0	49.1		ug/Kg		98	75 - 120
1,3-Dichlorobenzene	50.0	50.3		ug/Kg		101	72 - 120
1,4-Dichlorobenzene	50.0	49.3		ug/Kg		99	71 - 120
Trichlorofluoromethane	20.0	16.5		ug/Kg		82	28 - 152
Chlorodibromomethane	50.0	43.9		ug/Kg		88	46 - 125
Methylcyclohexane	50.0	57.4		ug/Kg		115	71 - 126
m-Xylene & p-Xylene	50.0	54.2		ug/Kg		108	78 - 120
o-Xylene	50.0	53.5		ug/Kg		107	77 - 120
Naphthalene	50.0	44.5		ug/Kg		89	68 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	75		61 - 127
4-Bromofluorobenzene (Surr)	89		61 - 132
Toluene-d8 (Surr)	76		66 - 125
Dibromofluoromethane (Surr)	79		43 - 131

Lab Sample ID: LCS 240-290567/6

Matrix: Solid

Analysis Batch: 290567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	132	*	ug/Kg		132	24 - 125
Benzene	50.0	48.3		ug/Kg		97	77 - 120
Dichlorobromomethane	50.0	53.6		ug/Kg		107	61 - 132
Bromoform	50.0	49.9		ug/Kg		100	40 - 140
Bromomethane	50.0	57.5		ug/Kg		115	10 - 153
2-Butanone (MEK)	100	118		ug/Kg		118	51 - 120

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290567/6

Matrix: Solid

Analysis Batch: 290567

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	50.0	55.8		ug/Kg		112	17 - 163
Carbon tetrachloride	50.0	53.7		ug/Kg		107	43 - 144
Chlorobenzene	50.0	48.1		ug/Kg		96	76 - 120
Chloroethane	50.0	56.1		ug/Kg		112	10 - 166
Chloroform	50.0	48.7		ug/Kg		97	74 - 120
Chloromethane	50.0	60.0		ug/Kg		120	41 - 124
1,1-Dichloroethane	50.0	50.6		ug/Kg		101	72 - 120
1,2-Dichloroethane	50.0	49.0		ug/Kg		98	71 - 120
1,1-Dichloroethene	50.0	48.1		ug/Kg		96	58 - 130
1,2-Dichloropropane	50.0	51.8		ug/Kg		104	78 - 122
cis-1,3-Dichloropropene	50.0	50.7		ug/Kg		101	66 - 126
trans-1,3-Dichloropropene	50.0	46.7		ug/Kg		93	55 - 121
Ethylbenzene	50.0	50.1		ug/Kg		100	76 - 120
2-Hexanone	100	117		ug/Kg		117	52 - 129
Methylene Chloride	50.0	53.4		ug/Kg		107	64 - 126
4-Methyl-2-pentanone (MIBK)	100	117		ug/Kg		117	65 - 131
Styrene	50.0	49.8		ug/Kg		100	80 - 120
1,1,2,2-Tetrachloroethane	50.0	54.6		ug/Kg		109	78 - 120
Tetrachloroethene	50.0	52.4		ug/Kg		105	68 - 122
Toluene	50.0	49.0		ug/Kg		98	74 - 120
Trichloroethene	50.0	50.5		ug/Kg		101	73 - 123
Vinyl chloride	50.0	57.0		ug/Kg		114	49 - 131
Xylenes, Total	100	101		ug/Kg		101	78 - 120
1,1,1-Trichloroethane	50.0	54.5		ug/Kg		109	60 - 136
1,1,2-Trichloroethane	50.0	50.0		ug/Kg		100	80 - 120
Cyclohexane	50.0	55.2		ug/Kg		110	66 - 129
1,2-Dibromo-3-Chloropropane	50.0	60.6		ug/Kg		121	40 - 133
Ethylene Dibromide	50.0	51.8		ug/Kg		104	80 - 120
Dichlorodifluoromethane	50.0	61.3		ug/Kg		123	15 - 127
cis-1,2-Dichloroethene	50.0	49.7		ug/Kg		99	78 - 120
trans-1,2-Dichloroethene	50.0	52.7		ug/Kg		105	74 - 124
Isopropylbenzene	50.0	52.6		ug/Kg		105	76 - 124
Methyl acetate	100	114		ug/Kg		114	63 - 126
Methyl tert-butyl ether	50.0	53.2		ug/Kg		106	68 - 129
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	49.8		ug/Kg		100	64 - 125
1,2,4-Trichlorobenzene	50.0	47.4		ug/Kg		95	60 - 124
1,2-Dichlorobenzene	50.0	48.8		ug/Kg		98	75 - 120
1,3-Dichlorobenzene	50.0	49.5		ug/Kg		99	72 - 120
1,4-Dichlorobenzene	50.0	47.9		ug/Kg		96	71 - 120
Trichlorofluoromethane	50.0	57.3		ug/Kg		115	28 - 152
Chlorodibromomethane	50.0	53.0		ug/Kg		106	46 - 125
Methylcyclohexane	50.0	49.8		ug/Kg		100	71 - 126
m-Xylene & p-Xylene	50.0	50.8		ug/Kg		102	78 - 120
o-Xylene	50.0	50.6		ug/Kg		101	77 - 120
Naphthalene	50.0	52.3		ug/Kg		105	68 - 123

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290567/6
Matrix: Solid
Analysis Batch: 290567

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	89		61 - 127
4-Bromofluorobenzene (Surr)	92		61 - 132
Toluene-d8 (Surr)	96		66 - 125
Dibromofluoromethane (Surr)	95		43 - 131

Lab Sample ID: MB 240-290805/6
Matrix: Water
Analysis Batch: 290805

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/11/17 11:29	1
Benzene	1.0	U	1.0	0.28	ug/L			08/11/17 11:29	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/11/17 11:29	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/11/17 11:29	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/11/17 11:29	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/11/17 11:29	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/11/17 11:29	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/11/17 11:29	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/11/17 11:29	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/11/17 11:29	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/11/17 11:29	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/11/17 11:29	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/11/17 11:29	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/11/17 11:29	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/11/17 11:29	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/11/17 11:29	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/11/17 11:29	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/11/17 11:29	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/11/17 11:29	1
2-Hexanone	10	U	10	1.2	ug/L			08/11/17 11:29	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/11/17 11:29	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/11/17 11:29	1
Styrene	1.0	U	1.0	0.23	ug/L			08/11/17 11:29	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/11/17 11:29	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/11/17 11:29	1
Toluene	1.0	U	1.0	0.23	ug/L			08/11/17 11:29	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/11/17 11:29	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/11/17 11:29	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/11/17 11:29	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/11/17 11:29	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/11/17 11:29	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/11/17 11:29	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/11/17 11:29	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/11/17 11:29	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/11/17 11:29	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/11/17 11:29	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/11/17 11:29	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/11/17 11:29	1

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-290805/6
Matrix: Water
Analysis Batch: 290805

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl acetate	10	U	10	1.4	ug/L			08/11/17 11:29	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/11/17 11:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/11/17 11:29	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/11/17 11:29	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/11/17 11:29	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/11/17 11:29	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/11/17 11:29	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/11/17 11:29	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/11/17 11:29	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/11/17 11:29	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/11/17 11:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		61 - 138		08/11/17 11:29	1
4-Bromofluorobenzene (Surr)	77		69 - 120		08/11/17 11:29	1
Toluene-d8 (Surr)	107		73 - 120		08/11/17 11:29	1
Dibromofluoromethane (Surr)	100		69 - 124		08/11/17 11:29	1

Lab Sample ID: LCS 240-290805/4
Matrix: Water
Analysis Batch: 290805

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	15.6		ug/L		78	35 - 131
Benzene	10.0	10.9		ug/L		109	79 - 120
Dichlorobromomethane	10.0	10.6		ug/L		106	79 - 125
Bromoform	10.0	7.90		ug/L		79	55 - 145
Bromomethane	10.0	12.7		ug/L		127	17 - 158
2-Butanone (MEK)	20.0	18.2		ug/L		91	43 - 149
Carbon disulfide	10.0	13.9		ug/L		139	49 - 141
Carbon tetrachloride	10.0	10.5		ug/L		105	55 - 171
Chlorobenzene	10.0	10.4		ug/L		104	80 - 120
Chloroethane	10.0	14.6		ug/L		146	10 - 149
Chloroform	10.0	11.1		ug/L		111	80 - 120
Chloromethane	10.0	11.3		ug/L		113	59 - 124
1,1-Dichloroethane	10.0	11.4		ug/L		114	74 - 120
1,2-Dichloroethane	10.0	11.3		ug/L		113	68 - 133
1,1-Dichloroethene	10.0	12.1		ug/L		121	65 - 127
1,2-Dichloropropane	10.0	11.3		ug/L		113	78 - 127
cis-1,3-Dichloropropene	10.0	9.91		ug/L		99	75 - 120
trans-1,3-Dichloropropene	10.0	10.4		ug/L		104	67 - 120
Ethylbenzene	10.0	10.1		ug/L		101	80 - 120
2-Hexanone	20.0	19.0		ug/L		95	28 - 169
Methylene Chloride	10.0	12.2		ug/L		122	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	18.8		ug/L		94	53 - 144
Styrene	10.0	9.23		ug/L		92	80 - 121
1,1,2,2-Tetrachloroethane	10.0	12.6	*	ug/L		126	58 - 122
Tetrachloroethene	10.0	10.7		ug/L		107	80 - 122

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QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-290805/4

Matrix: Water

Analysis Batch: 290805

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	10.0	12.0		ug/L		120	78 - 120
Trichloroethene	10.0	9.95		ug/L		99	76 - 124
Vinyl chloride	10.0	12.1		ug/L		121	65 - 124
Xylenes, Total	20.0	19.2		ug/L		96	80 - 120
1,1,1-Trichloroethane	10.0	11.4		ug/L		114	64 - 147
1,1,2-Trichloroethane	10.0	12.5	*	ug/L		125	76 - 121
Cyclohexane	10.0	12.8		ug/L		128	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	9.65		ug/L		97	50 - 130
Ethylene Dibromide	10.0	10.3		ug/L		103	80 - 120
Dichlorodifluoromethane	10.0	13.3		ug/L		133	42 - 141
cis-1,2-Dichloroethene	10.0	10.9		ug/L		109	77 - 120
trans-1,2-Dichloroethene	10.0	10.8		ug/L		108	74 - 124
Isopropylbenzene	10.0	8.72		ug/L		87	80 - 128
Methyl acetate	20.0	21.9		ug/L		109	63 - 137
Methyl tert-butyl ether	10.0	9.90		ug/L		99	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.5		ug/L		105	65 - 144
1,2,4-Trichlorobenzene	10.0	10.2		ug/L		102	34 - 141
1,2-Dichlorobenzene	10.0	10.3		ug/L		103	80 - 120
1,3-Dichlorobenzene	10.0	9.80		ug/L		98	80 - 120
1,4-Dichlorobenzene	10.0	10.1		ug/L		101	80 - 120
Trichlorofluoromethane	10.0	14.5		ug/L		145	27 - 176
Chlorodibromomethane	10.0	10.0		ug/L		100	64 - 129
Methylcyclohexane	10.0	10.1		ug/L		101	63 - 141
m-Xylene & p-Xylene	10.0	9.80		ug/L		98	80 - 120
o-Xylene	10.0	9.40		ug/L		94	80 - 120
Naphthalene	10.0	10.8		ug/L		108	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		61 - 138
4-Bromofluorobenzene (Surr)	89		69 - 120
Toluene-d8 (Surr)	117		73 - 120
Dibromofluoromethane (Surr)	104		69 - 124

Lab Sample ID: MB 240-291021/6

Matrix: Water

Analysis Batch: 291021

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/14/17 11:19	1
Benzene	1.0	U	1.0	0.28	ug/L			08/14/17 11:19	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/14/17 11:19	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/14/17 11:19	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/14/17 11:19	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/14/17 11:19	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/14/17 11:19	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/14/17 11:19	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/14/17 11:19	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-291021/6

Matrix: Water

Analysis Batch: 291021

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloroethane	1.0	U	1.0	0.41	ug/L			08/14/17 11:19	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/14/17 11:19	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/14/17 11:19	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/14/17 11:19	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/14/17 11:19	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/14/17 11:19	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/14/17 11:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/14/17 11:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/14/17 11:19	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/14/17 11:19	1
2-Hexanone	10	U	10	1.2	ug/L			08/14/17 11:19	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/14/17 11:19	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/14/17 11:19	1
Styrene	1.0	U	1.0	0.23	ug/L			08/14/17 11:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/14/17 11:19	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/14/17 11:19	1
Toluene	1.0	U	1.0	0.23	ug/L			08/14/17 11:19	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/14/17 11:19	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/14/17 11:19	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/14/17 11:19	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/14/17 11:19	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/14/17 11:19	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/14/17 11:19	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/14/17 11:19	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/14/17 11:19	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/14/17 11:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/14/17 11:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/14/17 11:19	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/14/17 11:19	1
Methyl acetate	10	U	10	1.4	ug/L			08/14/17 11:19	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/14/17 11:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/14/17 11:19	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/14/17 11:19	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/14/17 11:19	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/14/17 11:19	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/14/17 11:19	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/14/17 11:19	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/14/17 11:19	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/14/17 11:19	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/14/17 11:19	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	108		61 - 138		08/14/17 11:19	1
4-Bromofluorobenzene (Surr)	79		69 - 120		08/14/17 11:19	1
Toluene-d8 (Surr)	109		73 - 120		08/14/17 11:19	1
Dibromofluoromethane (Surr)	104		69 - 124		08/14/17 11:19	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-291021/4

Matrix: Water

Analysis Batch: 291021

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	15.1		ug/L		75	35 - 131
Benzene	10.0	11.1		ug/L		111	79 - 120
Dichlorobromomethane	10.0	10.9		ug/L		109	79 - 125
Bromoform	10.0	8.85		ug/L		89	55 - 145
Bromomethane	10.0	12.3		ug/L		123	17 - 158
2-Butanone (MEK)	20.0	19.8		ug/L		99	43 - 149
Carbon disulfide	10.0	13.2		ug/L		132	49 - 141
Carbon tetrachloride	10.0	10.7		ug/L		107	55 - 171
Chlorobenzene	10.0	10.9		ug/L		109	80 - 120
Chloroethane	10.0	13.9		ug/L		139	10 - 149
Chloroform	10.0	11.6		ug/L		116	80 - 120
Chloromethane	10.0	10.8		ug/L		108	59 - 124
1,1-Dichloroethane	10.0	11.6		ug/L		116	74 - 120
1,2-Dichloroethane	10.0	11.6		ug/L		116	68 - 133
1,1-Dichloroethene	10.0	11.2		ug/L		112	65 - 127
1,2-Dichloropropane	10.0	11.7		ug/L		117	78 - 127
cis-1,3-Dichloropropene	10.0	10.4		ug/L		104	75 - 120
trans-1,3-Dichloropropene	10.0	10.8		ug/L		108	67 - 120
Ethylbenzene	10.0	10.3		ug/L		103	80 - 120
2-Hexanone	20.0	19.3		ug/L		96	28 - 169
Methylene Chloride	10.0	12.6		ug/L		126	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	19.9		ug/L		99	53 - 144
Styrene	10.0	9.52		ug/L		95	80 - 121
1,1,2,2-Tetrachloroethane	10.0	13.4	*	ug/L		134	58 - 122
Tetrachloroethene	10.0	10.7		ug/L		107	80 - 122
Toluene	10.0	11.8		ug/L		118	78 - 120
Trichloroethene	10.0	10.4		ug/L		104	76 - 124
Vinyl chloride	10.0	10.3		ug/L		103	65 - 124
Xylenes, Total	20.0	19.8		ug/L		99	80 - 120
1,1,1-Trichloroethane	10.0	11.3		ug/L		113	64 - 147
1,1,2-Trichloroethane	10.0	12.2	*	ug/L		122	76 - 121
Cyclohexane	10.0	10.7		ug/L		107	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	10.9		ug/L		109	50 - 130
Ethylene Dibromide	10.0	10.9		ug/L		109	80 - 120
Dichlorodifluoromethane	10.0	7.94		ug/L		79	42 - 141
cis-1,2-Dichloroethene	10.0	10.9		ug/L		109	77 - 120
trans-1,2-Dichloroethene	10.0	10.9		ug/L		109	74 - 124
Isopropylbenzene	10.0	8.83		ug/L		88	80 - 128
Methyl acetate	20.0	22.8		ug/L		114	63 - 137
Methyl tert-butyl ether	10.0	10.6		ug/L		106	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.21		ug/L		92	65 - 144
1,2,4-Trichlorobenzene	10.0	10.9		ug/L		109	34 - 141
1,2-Dichlorobenzene	10.0	10.7		ug/L		107	80 - 120
1,3-Dichlorobenzene	10.0	10.3		ug/L		103	80 - 120
1,4-Dichlorobenzene	10.0	10.4		ug/L		104	80 - 120
Trichlorofluoromethane	10.0	10.3		ug/L		103	27 - 176
Chlorodibromomethane	10.0	10.8		ug/L		108	64 - 129

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-291021/4

Matrix: Water

Analysis Batch: 291021

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylcyclohexane	10.0	8.31		ug/L		83	63 - 141
m-Xylene & p-Xylene	10.0	10.1		ug/L		101	80 - 120
o-Xylene	10.0	9.70		ug/L		97	80 - 120
Naphthalene	10.0	11.3		ug/L		113	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		61 - 138
4-Bromofluorobenzene (Surr)	87		69 - 120
Toluene-d8 (Surr)	116		73 - 120
Dibromofluoromethane (Surr)	103		69 - 124

QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

GC/MS VOA

Prep Batch: 289903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-289903/1-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 290253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83317-7	S-170804-RA-19	Total/NA	Solid	5035	
240-83317-8	S-170804-RA-20	Total/NA	Solid	5035	
240-83317-9	S-170804-RA-21	Total/NA	Solid	5035	

Analysis Batch: 290464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83317-7	S-170804-RA-19	Total/NA	Solid	8260B	290253
MB 240-290464/6	Method Blank	Total/NA	Solid	8260B	
LCS 240-290464/5	Lab Control Sample	Total/NA	Solid	8260B	

Analysis Batch: 290567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83317-8	S-170804-RA-20	Total/NA	Solid	8260B	290253
240-83317-9	S-170804-RA-21	Total/NA	Solid	8260B	290253
MB 240-289903/1-A	Method Blank	Total/NA	Solid	8260B	289903
LCS 240-290567/6	Lab Control Sample	Total/NA	Solid	8260B	

Analysis Batch: 290805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83317-1	W-170803-RA-50	Total/NA	Water	8260B	
240-83317-3	W-170803-RA-52	Total/NA	Water	8260B	
240-83317-4	W-170803-RA-53	Total/NA	Water	8260B	
240-83317-6	W-170803-RA-55	Total/NA	Water	8260B	
240-83317-10	TRIP BLANK	Total/NA	Water	8260B	
MB 240-290805/6	Method Blank	Total/NA	Water	8260B	
LCS 240-290805/4	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 291021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83317-2	W-170803-RA-51	Total/NA	Water	8260B	
240-83317-5	W-170803-RA-54	Total/NA	Water	8260B	
MB 240-291021/6	Method Blank	Total/NA	Water	8260B	
LCS 240-291021/4	Lab Control Sample	Total/NA	Water	8260B	

General Chemistry

Analysis Batch: 290152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83317-7	S-170804-RA-19	Total/NA	Solid	Moisture	
240-83317-8	S-170804-RA-20	Total/NA	Solid	Moisture	
240-83317-9	S-170804-RA-21	Total/NA	Solid	Moisture	

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: W-170803-RA-50

Date Collected: 08/03/17 09:00

Date Received: 08/05/17 09:30

Lab Sample ID: 240-83317-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	290805	08/11/17 14:58	LEE	TAL CAN

Client Sample ID: W-170803-RA-51

Date Collected: 08/03/17 10:05

Date Received: 08/05/17 09:30

Lab Sample ID: 240-83317-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	291021	08/14/17 18:37	LEE	TAL CAN

Client Sample ID: W-170803-RA-52

Date Collected: 08/03/17 10:55

Date Received: 08/05/17 09:30

Lab Sample ID: 240-83317-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1000	290805	08/11/17 15:49	LEE	TAL CAN

Client Sample ID: W-170803-RA-53

Date Collected: 08/03/17 12:00

Date Received: 08/05/17 09:30

Lab Sample ID: 240-83317-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		12.5	290805	08/11/17 16:12	LEE	TAL CAN

Client Sample ID: W-170803-RA-54

Date Collected: 08/03/17 13:00

Date Received: 08/05/17 09:30

Lab Sample ID: 240-83317-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	291021	08/14/17 19:00	LEE	TAL CAN

Client Sample ID: W-170803-RA-55

Date Collected: 08/03/17 15:30

Date Received: 08/05/17 09:30

Lab Sample ID: 240-83317-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		125	290805	08/11/17 16:58	LEE	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: S-170804-RA-19

Lab Sample ID: 240-83317-7

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	290152	08/07/17 09:32	PW	TAL CAN

Client Sample ID: S-170804-RA-19

Lab Sample ID: 240-83317-7

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Percent Solids: 99.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			290253	08/05/17 13:00	LAM	TAL CAN
Total/NA	Analysis	8260B		1	290464	08/09/17 21:32	SAM	TAL CAN

Client Sample ID: S-170804-RA-20

Lab Sample ID: 240-83317-8

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	290152	08/07/17 09:41	PW	TAL CAN

Client Sample ID: S-170804-RA-20

Lab Sample ID: 240-83317-8

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Percent Solids: 99.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			290253	08/05/17 13:00	LAM	TAL CAN
Total/NA	Analysis	8260B		1	290567	08/10/17 12:20	TJL2	TAL CAN

Client Sample ID: S-170804-RA-21

Lab Sample ID: 240-83317-9

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	290152	08/07/17 09:41	PW	TAL CAN

Client Sample ID: S-170804-RA-21

Lab Sample ID: 240-83317-9

Date Collected: 08/04/17 00:00

Matrix: Solid

Date Received: 08/05/17 09:30

Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			290253	08/05/17 13:00	LAM	TAL CAN
Total/NA	Analysis	8260B		1	290567	08/10/17 12:41	TJL2	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83317-10

Date Collected: 08/03/17 00:00

Matrix: Water

Date Received: 08/05/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	290805	08/11/17 17:20	LEE	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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- 2
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Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83317-1

Laboratory: TestAmerica Canton

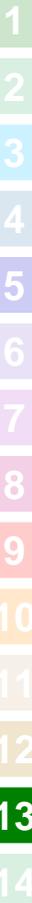
Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Minnesota	NELAP	5	039-999-348	12-31-17 *

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

* Accreditation/Certification renewal pending - accreditation/certification considered valid.





CONESTOGA-ROVERS & ASSOCIATES

CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States

Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: **SP- 02435**

PAGE 1 OF 1

(See Reverse Side for Instructions)

1.2/Cl.2

Project No/ Phase/Task Code: <u>88751-40</u>			Laboratory Name: <u>Test America</u>				Lab Location:			SSOW ID:								
Project Name: <u>6714 Walker St</u>			Lab Contact:				Lab Quote No:			Cooler No:								
Project Location: <u>SLP</u>			CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)			Carrier:								
Chemistry Contact: <u>G Andersen</u>			Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample <u>VOC</u>	MS/MSD Request	Airbill No:			
Sampler(s): <u>Amot</u>															Date Shipped:			
Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)	DATE (mm/dd/yy)	TIME (hh:mm)	Matrix Code	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	MS/MSD Request	COMMENTS/ SPECIAL INSTRUCTIONS:		
1	<u>W-170803-RA-50</u>	<u>8/3/17</u>	<u>900</u>	<u>VL</u>	<u>C</u>		<u>3</u>							<u>3</u>	<u>✓</u>			
2	<u>W-170803-RA-51</u>		<u>1055</u>				<u>3</u>							<u>3</u>	<u>✓</u>			
3	<u>W-170803-RA-52</u>		<u>1055</u>				<u>3</u>							<u>3</u>	<u>✓</u>			
	<u>W-170803-RA-53</u>		<u>1200</u>				<u>3</u>							<u>3</u>	<u>✓</u>			
	<u>W-170807-RA-54</u>		<u>1300</u>				<u>3</u>							<u>3</u>	<u>✓</u>			
	<u>W-170803-RA-55</u>		<u>1530</u>	<u>✓</u>			<u>3</u>							<u>3</u>	<u>✓</u>			
8	<u>S-170804-RA-19</u>	<u>8/4/17</u>		<u>50</u>										<u>1</u>	<u>✓</u>			
8	<u>S-170807-RA-20</u>	<u>8/4/17</u>												<u>1</u>	<u>✓</u>			
9	<u>S-170804-RA-21</u>	<u>8/4/17</u>												<u>1</u>	<u>✓</u>			
10	<u>Tap blank</u>						<u>1</u>							<u>1</u>	<u>✓</u>			
11																		
12																		
13																		
14																		
TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:						Total Number of Containers:			Notes/ Special Requirements:									
All Samples in Cooler must be on COC																		
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY		COMPANY	DATE	TIME										
<u>[Signature]</u>	<u>GHD</u>	<u>8/4/17</u>	<u>1600</u>	<u>POP</u>		<u>TAL</u>	<u>8-5-17</u>	<u>930</u>										



THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

8/15/2017

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 83317

Client CRA Site Name _____ Cooler unpacked by: POP
 Cooler Received on 8-5-17 Opened on 8-5-17
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0 °C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp. 1.2 °C
 2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 3. Shippers' packing slip attached to the cooler(s)? Yes No
 4. Did custody papers accompany the sample(s)? Yes No
 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
 7. Did all bottles arrive in good condition (Unbroken)? Yes No
 8. Could all bottle labels be reconciled with the COC? Yes No
 9. Were correct bottle(s) used for the test(s) indicated? Yes No
 10. Sufficient quantity received to perform indicated analyses? Yes No
 11. Are these work share samples?
 If yes, Questions 11-15 have been checked at the originating laboratory.
 11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC697954
 12. Were VOAs on the COC? Yes No NA
 13. Were air bubbles >6 mm in any VOA vials? Larger than this. Yes No NA
 14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # B70350 NB Yes No
 15. Was a LL Hg or Me Hg trip blank present? Yes No
- Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
- Concerning _____

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: _____

No Sample times for soil samples.

17. SAMPLE CONDITION
 Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION
 Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-83881-1

Client Project/Site: 88751, Hinshaw & Culbertson

For:

GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson



Authorized for release by:
8/25/2017 9:19:14 AM

Denise Heckler, Project Manager II
(330)966-9477

denise.heckler@testamericainc.com

LINKS

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results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Job ID: 240-83881-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-83881-1

Comments

No additional comments.

Receipt

The samples were received on 8/18/2017 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7° C.

GC/MS VOA

Method(s) 8260B: The following samples were submitted for volatile analysis with insufficient preservation (pH>2): W-170817-RA-56 (240-83881-1), W-170817-RA-57 (240-83881-2).

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-292085 recovered outside control limits for multiple analytes: These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-292208 recovered outside control limits for multiple analytes: These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

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Sample Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-83881-1	W-170817-RA-56	Water	08/17/17 07:45	08/18/17 09:15
240-83881-2	W-170817-RA-57	Water	08/17/17 08:30	08/18/17 09:15
240-83881-3	W-170817-RA-58	Water	08/17/17 13:35	08/18/17 09:15
240-83881-4	W-170817-RA-59	Water	08/17/17 14:05	08/18/17 09:15
240-83881-5	TRIP BLANK	Water	08/17/17 00:00	08/18/17 09:15

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Detection Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: W-170817-RA-56

Lab Sample ID: 240-83881-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	19000		500	150	ug/L	500		8260B	Total/NA

Client Sample ID: W-170817-RA-57

Lab Sample ID: 240-83881-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	31000		1300	380	ug/L	1250		8260B	Total/NA

Client Sample ID: W-170817-RA-58

Lab Sample ID: 240-83881-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	50		11	3.1	ug/L	11.11		8260B	Total/NA
Ethylbenzene	22		11	2.9	ug/L	11.11		8260B	Total/NA
Vinyl chloride	59		11	5.0	ug/L	11.11		8260B	Total/NA
Xylenes, Total	28		22	2.7	ug/L	11.11		8260B	Total/NA
cis-1,2-Dichloroethene	280		11	3.3	ug/L	11.11		8260B	Total/NA
trans-1,2-Dichloroethene	13		11	3.2	ug/L	11.11		8260B	Total/NA
Isopropylbenzene	3.4	J	11	2.3	ug/L	11.11		8260B	Total/NA
1,2-Dichlorobenzene	13		11	2.9	ug/L	11.11		8260B	Total/NA
Naphthalene	110	B	11	2.8	ug/L	11.11		8260B	Total/NA

Client Sample ID: W-170817-RA-59

Lab Sample ID: 240-83881-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	14000		500	150	ug/L	500		8260B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83881-5

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: W-170817-RA-56

Lab Sample ID: 240-83881-1

Date Collected: 08/17/17 07:45

Matrix: Water

Date Received: 08/18/17 09:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5000	U	5000	880	ug/L			08/22/17 20:04	500
Benzene	500	U	500	140	ug/L			08/22/17 20:04	500
Dichlorobromomethane	500	U	500	150	ug/L			08/22/17 20:04	500
Bromoform	500	U	500	220	ug/L			08/22/17 20:04	500
Bromomethane	500	U	500	210	ug/L			08/22/17 20:04	500
2-Butanone (MEK)	5000	U	5000	510	ug/L			08/22/17 20:04	500
Carbon disulfide	500	U	500	170	ug/L			08/22/17 20:04	500
Carbon tetrachloride	500	U	500	180	ug/L			08/22/17 20:04	500
Chlorobenzene	500	U	500	160	ug/L			08/22/17 20:04	500
Chloroethane	500	U	500	210	ug/L			08/22/17 20:04	500
Chloroform	500	U	500	160	ug/L			08/22/17 20:04	500
Chloromethane	500	U	500	220	ug/L			08/22/17 20:04	500
1,1-Dichloroethane	500	U	500	130	ug/L			08/22/17 20:04	500
1,2-Dichloroethane	500	U	500	150	ug/L			08/22/17 20:04	500
1,1-Dichloroethene	500	U	500	140	ug/L			08/22/17 20:04	500
1,2-Dichloropropane	500	U	500	150	ug/L			08/22/17 20:04	500
cis-1,3-Dichloropropene	500	U	500	130	ug/L			08/22/17 20:04	500
trans-1,3-Dichloropropene	500	U	500	160	ug/L			08/22/17 20:04	500
Ethylbenzene	500	U	500	130	ug/L			08/22/17 20:04	500
2-Hexanone	5000	U	5000	620	ug/L			08/22/17 20:04	500
Methylene Chloride	500	U	500	270	ug/L			08/22/17 20:04	500
4-Methyl-2-pentanone (MIBK)	5000	U	5000	360	ug/L			08/22/17 20:04	500
Styrene	500	U	500	120	ug/L			08/22/17 20:04	500
1,1,2,2-Tetrachloroethane	500	U *	500	160	ug/L			08/22/17 20:04	500
Tetrachloroethene	19000		500	150	ug/L			08/22/17 20:04	500
Toluene	500	U *	500	120	ug/L			08/22/17 20:04	500
Trichloroethene	500	U	500	170	ug/L			08/22/17 20:04	500
Vinyl chloride	500	U	500	230	ug/L			08/22/17 20:04	500
Xylenes, Total	1000	U	1000	120	ug/L			08/22/17 20:04	500
1,1,1-Trichloroethane	500	U	500	120	ug/L			08/22/17 20:04	500
1,1,2-Trichloroethane	500	U *	500	170	ug/L			08/22/17 20:04	500
Cyclohexane	500	U	500	220	ug/L			08/22/17 20:04	500
1,2-Dibromo-3-Chloropropane	1000	U	1000	240	ug/L			08/22/17 20:04	500
Ethylene Dibromide	500	U	500	120	ug/L			08/22/17 20:04	500
Dichlorodifluoromethane	500	U	500	250	ug/L			08/22/17 20:04	500
cis-1,2-Dichloroethene	500	U	500	150	ug/L			08/22/17 20:04	500
trans-1,2-Dichloroethene	500	U	500	150	ug/L			08/22/17 20:04	500
Isopropylbenzene	500	U	500	110	ug/L			08/22/17 20:04	500
Methyl acetate	5000	U	5000	720	ug/L			08/22/17 20:04	500
Methyl tert-butyl ether	500	U	500	140	ug/L			08/22/17 20:04	500
1,1,2-Trichloro-1,2,2-trifluoroethane	500	U	500	210	ug/L			08/22/17 20:04	500
1,2,4-Trichlorobenzene	500	U	500	140	ug/L			08/22/17 20:04	500
1,2-Dichlorobenzene	500	U	500	130	ug/L			08/22/17 20:04	500
1,3-Dichlorobenzene	500	U	500	160	ug/L			08/22/17 20:04	500
1,4-Dichlorobenzene	500	U	500	120	ug/L			08/22/17 20:04	500
Trichlorofluoromethane	500	U	500	250	ug/L			08/22/17 20:04	500
Chlorodibromomethane	500	U	500	130	ug/L			08/22/17 20:04	500
Methylcyclohexane	500	U	500	230	ug/L			08/22/17 20:04	500
Naphthalene	500	U	500	130	ug/L			08/22/17 20:04	500

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: W-170817-RA-56

Lab Sample ID: 240-83881-1

Date Collected: 08/17/17 07:45

Matrix: Water

Date Received: 08/18/17 09:15

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	97		61 - 138		08/22/17 20:04	500
4-Bromofluorobenzene (Surr)	79		69 - 120		08/22/17 20:04	500
Toluene-d8 (Surr)	85		73 - 120		08/22/17 20:04	500
Dibromofluoromethane (Surr)	100		69 - 124		08/22/17 20:04	500

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: W-170817-RA-57

Lab Sample ID: 240-83881-2

Date Collected: 08/17/17 08:30

Matrix: Water

Date Received: 08/18/17 09:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	13000	U	13000	2200	ug/L			08/23/17 14:22	1250
Benzene	1300	U	1300	350	ug/L			08/23/17 14:22	1250
Dichlorobromomethane	1300	U	1300	380	ug/L			08/23/17 14:22	1250
Bromoform	1300	U	1300	540	ug/L			08/23/17 14:22	1250
Bromomethane	1300	U	1300	530	ug/L			08/23/17 14:22	1250
2-Butanone (MEK)	13000	U	13000	1300	ug/L			08/23/17 14:22	1250
Carbon disulfide	1300	U	1300	430	ug/L			08/23/17 14:22	1250
Carbon tetrachloride	1300	U	1300	440	ug/L			08/23/17 14:22	1250
Chlorobenzene	1300	U	1300	400	ug/L			08/23/17 14:22	1250
Chloroethane	1300	U	1300	510	ug/L			08/23/17 14:22	1250
Chloroform	1300	U	1300	390	ug/L			08/23/17 14:22	1250
Chloromethane	1300	U	1300	540	ug/L			08/23/17 14:22	1250
1,1-Dichloroethane	1300	U	1300	310	ug/L			08/23/17 14:22	1250
1,2-Dichloroethane	1300	U	1300	380	ug/L			08/23/17 14:22	1250
1,1-Dichloroethene	1300	U	1300	340	ug/L			08/23/17 14:22	1250
1,2-Dichloropropane	1300	U	1300	380	ug/L			08/23/17 14:22	1250
cis-1,3-Dichloropropene	1300	U	1300	330	ug/L			08/23/17 14:22	1250
trans-1,3-Dichloropropene	1300	U	1300	390	ug/L			08/23/17 14:22	1250
Ethylbenzene	1300	U	1300	330	ug/L			08/23/17 14:22	1250
2-Hexanone	13000	U	13000	1500	ug/L			08/23/17 14:22	1250
Methylene Chloride	1300	U	1300	660	ug/L			08/23/17 14:22	1250
4-Methyl-2-pentanone (MIBK)	13000	U	13000	890	ug/L			08/23/17 14:22	1250
Styrene	1300	U	1300	290	ug/L			08/23/17 14:22	1250
1,1,2,2-Tetrachloroethane	1300	U	1300	400	ug/L			08/23/17 14:22	1250
Tetrachloroethene	31000		1300	380	ug/L			08/23/17 14:22	1250
Toluene	1300	U *	1300	290	ug/L			08/23/17 14:22	1250
Trichloroethene	1300	U	1300	410	ug/L			08/23/17 14:22	1250
Vinyl chloride	1300	U	1300	560	ug/L			08/23/17 14:22	1250
Xylenes, Total	2500	U	2500	300	ug/L			08/23/17 14:22	1250
1,1,1-Trichloroethane	1300	U	1300	290	ug/L			08/23/17 14:22	1250
1,1,2-Trichloroethane	1300	U *	1300	430	ug/L			08/23/17 14:22	1250
Cyclohexane	1300	U	1300	550	ug/L			08/23/17 14:22	1250
1,2-Dibromo-3-Chloropropane	2500	U	2500	590	ug/L			08/23/17 14:22	1250
Ethylene Dibromide	1300	U	1300	290	ug/L			08/23/17 14:22	1250
Dichlorodifluoromethane	1300	U	1300	630	ug/L			08/23/17 14:22	1250
cis-1,2-Dichloroethene	1300	U	1300	380	ug/L			08/23/17 14:22	1250
trans-1,2-Dichloroethene	1300	U	1300	360	ug/L			08/23/17 14:22	1250
Isopropylbenzene	1300	U	1300	260	ug/L			08/23/17 14:22	1250
Methyl acetate	13000	U	13000	1800	ug/L			08/23/17 14:22	1250
Methyl tert-butyl ether	1300	U	1300	340	ug/L			08/23/17 14:22	1250
1,1,2-Trichloro-1,2,2-trifluoroethane	1300	U	1300	510	ug/L			08/23/17 14:22	1250
1,2,4-Trichlorobenzene	1300	U	1300	340	ug/L			08/23/17 14:22	1250
1,2-Dichlorobenzene	1300	U	1300	330	ug/L			08/23/17 14:22	1250
1,3-Dichlorobenzene	1300	U	1300	400	ug/L			08/23/17 14:22	1250
1,4-Dichlorobenzene	1300	U	1300	290	ug/L			08/23/17 14:22	1250
Trichlorofluoromethane	1300	U	1300	630	ug/L			08/23/17 14:22	1250
Chlorodibromomethane	1300	U	1300	310	ug/L			08/23/17 14:22	1250
Methylcyclohexane	1300	U	1300	560	ug/L			08/23/17 14:22	1250
Naphthalene	1300	U	1300	310	ug/L			08/23/17 14:22	1250

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: W-170817-RA-57

Date Collected: 08/17/17 08:30

Date Received: 08/18/17 09:15

Lab Sample ID: 240-83881-2

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	95		61 - 138		08/23/17 14:22	1250
4-Bromofluorobenzene (Surr)	81		69 - 120		08/23/17 14:22	1250
Toluene-d8 (Surr)	86		73 - 120		08/23/17 14:22	1250
Dibromofluoromethane (Surr)	98		69 - 124		08/23/17 14:22	1250

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: W-170817-RA-58

Lab Sample ID: 240-83881-3

Date Collected: 08/17/17 13:35

Matrix: Water

Date Received: 08/18/17 09:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	110	U	110	20	ug/L			08/22/17 20:51	11.11
Benzene	50		11	3.1	ug/L			08/22/17 20:51	11.11
Dichlorobromomethane	11	U	11	3.3	ug/L			08/22/17 20:51	11.11
Bromoform	11	U	11	4.8	ug/L			08/22/17 20:51	11.11
Bromomethane	11	U	11	4.7	ug/L			08/22/17 20:51	11.11
2-Butanone (MEK)	110	U	110	11	ug/L			08/22/17 20:51	11.11
Carbon disulfide	11	U	11	3.8	ug/L			08/22/17 20:51	11.11
Carbon tetrachloride	11	U	11	3.9	ug/L			08/22/17 20:51	11.11
Chlorobenzene	11	U	11	3.6	ug/L			08/22/17 20:51	11.11
Chloroethane	11	U	11	4.6	ug/L			08/22/17 20:51	11.11
Chloroform	11	U	11	3.4	ug/L			08/22/17 20:51	11.11
Chloromethane	11	U	11	4.8	ug/L			08/22/17 20:51	11.11
1,1-Dichloroethane	11	U	11	2.8	ug/L			08/22/17 20:51	11.11
1,2-Dichloroethane	11	U	11	3.3	ug/L			08/22/17 20:51	11.11
1,1-Dichloroethene	11	U	11	3.0	ug/L			08/22/17 20:51	11.11
1,2-Dichloropropane	11	U	11	3.3	ug/L			08/22/17 20:51	11.11
cis-1,3-Dichloropropene	11	U	11	2.9	ug/L			08/22/17 20:51	11.11
trans-1,3-Dichloropropene	11	U	11	3.4	ug/L			08/22/17 20:51	11.11
Ethylbenzene	22		11	2.9	ug/L			08/22/17 20:51	11.11
2-Hexanone	110	U	110	14	ug/L			08/22/17 20:51	11.11
Methylene Chloride	11	U	11	5.9	ug/L			08/22/17 20:51	11.11
4-Methyl-2-pentanone (MIBK)	110	U	110	7.9	ug/L			08/22/17 20:51	11.11
Styrene	11	U	11	2.6	ug/L			08/22/17 20:51	11.11
1,1,2,2-Tetrachloroethane	11	U *	11	3.6	ug/L			08/22/17 20:51	11.11
Tetrachloroethene	11	U	11	3.3	ug/L			08/22/17 20:51	11.11
Toluene	11	U *	11	2.6	ug/L			08/22/17 20:51	11.11
Trichloroethene	11	U	11	3.7	ug/L			08/22/17 20:51	11.11
Vinyl chloride	59		11	5.0	ug/L			08/22/17 20:51	11.11
Xylenes, Total	28		22	2.7	ug/L			08/22/17 20:51	11.11
1,1,1-Trichloroethane	11	U	11	2.6	ug/L			08/22/17 20:51	11.11
1,1,2-Trichloroethane	11	U *	11	3.8	ug/L			08/22/17 20:51	11.11
Cyclohexane	11	U	11	4.9	ug/L			08/22/17 20:51	11.11
1,2-Dibromo-3-Chloropropane	22	U	22	5.2	ug/L			08/22/17 20:51	11.11
Ethylene Dibromide	11	U	11	2.6	ug/L			08/22/17 20:51	11.11
Dichlorodifluoromethane	11	U	11	5.6	ug/L			08/22/17 20:51	11.11
cis-1,2-Dichloroethene	280		11	3.3	ug/L			08/22/17 20:51	11.11
trans-1,2-Dichloroethene	13		11	3.2	ug/L			08/22/17 20:51	11.11
Isopropylbenzene	3.4 J		11	2.3	ug/L			08/22/17 20:51	11.11
Methyl acetate	110	U	110	16	ug/L			08/22/17 20:51	11.11
Methyl tert-butyl ether	11	U	11	3.0	ug/L			08/22/17 20:51	11.11
1,1,2-Trichloro-1,2,2-trifluoroethane	11	U	11	4.6	ug/L			08/22/17 20:51	11.11
1,2,4-Trichlorobenzene	11	U	11	3.0	ug/L			08/22/17 20:51	11.11
1,2-Dichlorobenzene	13		11	2.9	ug/L			08/22/17 20:51	11.11
1,3-Dichlorobenzene	11	U	11	3.6	ug/L			08/22/17 20:51	11.11
1,4-Dichlorobenzene	11	U	11	2.6	ug/L			08/22/17 20:51	11.11
Trichlorofluoromethane	11	U	11	5.6	ug/L			08/22/17 20:51	11.11
Chlorodibromomethane	11	U	11	2.8	ug/L			08/22/17 20:51	11.11
Methylcyclohexane	11	U	11	5.0	ug/L			08/22/17 20:51	11.11
Naphthalene	110 B		11	2.8	ug/L			08/22/17 20:51	11.11

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: W-170817-RA-58

Lab Sample ID: 240-83881-3

Date Collected: 08/17/17 13:35

Matrix: Water

Date Received: 08/18/17 09:15

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	91		61 - 138		08/22/17 20:51	11.11
4-Bromofluorobenzene (Surr)	92		69 - 120		08/22/17 20:51	11.11
Toluene-d8 (Surr)	88		73 - 120		08/22/17 20:51	11.11
Dibromofluoromethane (Surr)	91		69 - 124		08/22/17 20:51	11.11

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: W-170817-RA-59

Lab Sample ID: 240-83881-4

Date Collected: 08/17/17 14:05

Matrix: Water

Date Received: 08/18/17 09:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5000	U	5000	880	ug/L			08/23/17 14:45	500
Benzene	500	U	500	140	ug/L			08/23/17 14:45	500
Dichlorobromomethane	500	U	500	150	ug/L			08/23/17 14:45	500
Bromoform	500	U	500	220	ug/L			08/23/17 14:45	500
Bromomethane	500	U	500	210	ug/L			08/23/17 14:45	500
2-Butanone (MEK)	5000	U	5000	510	ug/L			08/23/17 14:45	500
Carbon disulfide	500	U	500	170	ug/L			08/23/17 14:45	500
Carbon tetrachloride	500	U	500	180	ug/L			08/23/17 14:45	500
Chlorobenzene	500	U	500	160	ug/L			08/23/17 14:45	500
Chloroethane	500	U	500	210	ug/L			08/23/17 14:45	500
Chloroform	500	U	500	160	ug/L			08/23/17 14:45	500
Chloromethane	500	U	500	220	ug/L			08/23/17 14:45	500
1,1-Dichloroethane	500	U	500	130	ug/L			08/23/17 14:45	500
1,2-Dichloroethane	500	U	500	150	ug/L			08/23/17 14:45	500
1,1-Dichloroethene	500	U	500	140	ug/L			08/23/17 14:45	500
1,2-Dichloropropane	500	U	500	150	ug/L			08/23/17 14:45	500
cis-1,3-Dichloropropene	500	U	500	130	ug/L			08/23/17 14:45	500
trans-1,3-Dichloropropene	500	U	500	160	ug/L			08/23/17 14:45	500
Ethylbenzene	500	U	500	130	ug/L			08/23/17 14:45	500
2-Hexanone	5000	U	5000	620	ug/L			08/23/17 14:45	500
Methylene Chloride	500	U	500	270	ug/L			08/23/17 14:45	500
4-Methyl-2-pentanone (MIBK)	5000	U	5000	360	ug/L			08/23/17 14:45	500
Styrene	500	U	500	120	ug/L			08/23/17 14:45	500
1,1,2,2-Tetrachloroethane	500	U	500	160	ug/L			08/23/17 14:45	500
Tetrachloroethene	14000		500	150	ug/L			08/23/17 14:45	500
Toluene	500	U *	500	120	ug/L			08/23/17 14:45	500
Trichloroethene	500	U	500	170	ug/L			08/23/17 14:45	500
Vinyl chloride	500	U	500	230	ug/L			08/23/17 14:45	500
Xylenes, Total	1000	U	1000	120	ug/L			08/23/17 14:45	500
1,1,1-Trichloroethane	500	U	500	120	ug/L			08/23/17 14:45	500
1,1,2-Trichloroethane	500	U *	500	170	ug/L			08/23/17 14:45	500
Cyclohexane	500	U	500	220	ug/L			08/23/17 14:45	500
1,2-Dibromo-3-Chloropropane	1000	U	1000	240	ug/L			08/23/17 14:45	500
Ethylene Dibromide	500	U	500	120	ug/L			08/23/17 14:45	500
Dichlorodifluoromethane	500	U	500	250	ug/L			08/23/17 14:45	500
cis-1,2-Dichloroethene	500	U	500	150	ug/L			08/23/17 14:45	500
trans-1,2-Dichloroethene	500	U	500	150	ug/L			08/23/17 14:45	500
Isopropylbenzene	500	U	500	110	ug/L			08/23/17 14:45	500
Methyl acetate	5000	U	5000	720	ug/L			08/23/17 14:45	500
Methyl tert-butyl ether	500	U	500	140	ug/L			08/23/17 14:45	500
1,1,2-Trichloro-1,2,2-trifluoroethane	500	U	500	210	ug/L			08/23/17 14:45	500
1,2,4-Trichlorobenzene	500	U	500	140	ug/L			08/23/17 14:45	500
1,2-Dichlorobenzene	500	U	500	130	ug/L			08/23/17 14:45	500
1,3-Dichlorobenzene	500	U	500	160	ug/L			08/23/17 14:45	500
1,4-Dichlorobenzene	500	U	500	120	ug/L			08/23/17 14:45	500
Trichlorofluoromethane	500	U	500	250	ug/L			08/23/17 14:45	500
Chlorodibromomethane	500	U	500	130	ug/L			08/23/17 14:45	500
Methylcyclohexane	500	U	500	230	ug/L			08/23/17 14:45	500
Naphthalene	500	U	500	130	ug/L			08/23/17 14:45	500

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: W-170817-RA-59

Date Collected: 08/17/17 14:05

Date Received: 08/18/17 09:15

Lab Sample ID: 240-83881-4

Matrix: Water

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	98		61 - 138		08/23/17 14:45	500
4-Bromofluorobenzene (Surr)	80		69 - 120		08/23/17 14:45	500
Toluene-d8 (Surr)	85		73 - 120		08/23/17 14:45	500
Dibromofluoromethane (Surr)	100		69 - 124		08/23/17 14:45	500

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83881-5

Date Collected: 08/17/17 00:00

Matrix: Water

Date Received: 08/18/17 09:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/22/17 21:37	1
Benzene	1.0	U	1.0	0.28	ug/L			08/22/17 21:37	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/22/17 21:37	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/22/17 21:37	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/22/17 21:37	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/22/17 21:37	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/22/17 21:37	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/22/17 21:37	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/22/17 21:37	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/22/17 21:37	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/22/17 21:37	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/22/17 21:37	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/22/17 21:37	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/22/17 21:37	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/22/17 21:37	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/22/17 21:37	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/22/17 21:37	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/22/17 21:37	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/22/17 21:37	1
2-Hexanone	10	U	10	1.2	ug/L			08/22/17 21:37	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/22/17 21:37	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/22/17 21:37	1
Styrene	1.0	U	1.0	0.23	ug/L			08/22/17 21:37	1
1,1,2,2-Tetrachloroethane	1.0	U *	1.0	0.32	ug/L			08/22/17 21:37	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/22/17 21:37	1
Toluene	1.0	U *	1.0	0.23	ug/L			08/22/17 21:37	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/22/17 21:37	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/22/17 21:37	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/22/17 21:37	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/22/17 21:37	1
1,1,2-Trichloroethane	1.0	U *	1.0	0.34	ug/L			08/22/17 21:37	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/22/17 21:37	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/22/17 21:37	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/22/17 21:37	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/22/17 21:37	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/22/17 21:37	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/22/17 21:37	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/22/17 21:37	1
Methyl acetate	10	U	10	1.4	ug/L			08/22/17 21:37	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/22/17 21:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/22/17 21:37	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/22/17 21:37	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/22/17 21:37	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/22/17 21:37	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/22/17 21:37	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/22/17 21:37	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/22/17 21:37	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/22/17 21:37	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/22/17 21:37	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-83881-5

Date Collected: 08/17/17 00:00

Matrix: Water

Date Received: 08/18/17 09:15

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	93		61 - 138		08/22/17 21:37	1
4-Bromofluorobenzene (Surr)	82		69 - 120		08/22/17 21:37	1
Toluene-d8 (Surr)	87		73 - 120		08/22/17 21:37	1
Dibromofluoromethane (Surr)	95		69 - 124		08/22/17 21:37	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (61-138)	BFB (69-120)	TOL (73-120)	DBFM (69-124)
240-83881-1	W-170817-RA-56	97	79	85	100
240-83881-2	W-170817-RA-57	95	81	86	98
240-83881-3	W-170817-RA-58	91	92	88	91
240-83881-4	W-170817-RA-59	98	80	85	100
240-83881-5	TRIP BLANK	93	82	87	95
LCS 240-292085/6	Lab Control Sample	87	96	98	86
LCS 240-292208/4	Lab Control Sample	85	96	97	84
MB 240-292085/7	Method Blank	93	83	90	92
MB 240-292208/6	Method Blank	93	83	89	94

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: GHD Services Inc.
 Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-292085/7

Matrix: Water

Analysis Batch: 292085

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/22/17 14:16	1
Benzene	1.0	U	1.0	0.28	ug/L			08/22/17 14:16	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/22/17 14:16	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/22/17 14:16	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/22/17 14:16	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/22/17 14:16	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/22/17 14:16	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/22/17 14:16	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/22/17 14:16	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/22/17 14:16	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/22/17 14:16	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/22/17 14:16	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/22/17 14:16	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/22/17 14:16	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/22/17 14:16	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/22/17 14:16	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/22/17 14:16	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/22/17 14:16	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/22/17 14:16	1
2-Hexanone	10	U	10	1.2	ug/L			08/22/17 14:16	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/22/17 14:16	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/22/17 14:16	1
Styrene	1.0	U	1.0	0.23	ug/L			08/22/17 14:16	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/22/17 14:16	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/22/17 14:16	1
Toluene	1.0	U	1.0	0.23	ug/L			08/22/17 14:16	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/22/17 14:16	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/22/17 14:16	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/22/17 14:16	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/22/17 14:16	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/22/17 14:16	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/22/17 14:16	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/22/17 14:16	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/22/17 14:16	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/22/17 14:16	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/22/17 14:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/22/17 14:16	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/22/17 14:16	1
Methyl acetate	10	U	10	1.4	ug/L			08/22/17 14:16	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/22/17 14:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/22/17 14:16	1
1,2,4-Trichlorobenzene	0.277	J	1.0	0.27	ug/L			08/22/17 14:16	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/22/17 14:16	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/22/17 14:16	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/22/17 14:16	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/22/17 14:16	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/22/17 14:16	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/22/17 14:16	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-292085/7
Matrix: Water
Analysis Batch: 292085

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.273	J	1.0	0.25	ug/L			08/22/17 14:16	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		61 - 138					08/22/17 14:16	1
4-Bromofluorobenzene (Surr)	83		69 - 120					08/22/17 14:16	1
Toluene-d8 (Surr)	90		73 - 120					08/22/17 14:16	1
Dibromofluoromethane (Surr)	92		69 - 124					08/22/17 14:16	1

Lab Sample ID: LCS 240-292085/6
Matrix: Water
Analysis Batch: 292085

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	20.0		ug/L		100	35 - 131
Benzene	10.0	11.9		ug/L		119	79 - 120
Dichlorobromomethane	10.0	12.0		ug/L		120	79 - 125
Bromoform	10.0	10.5		ug/L		105	55 - 145
Bromomethane	10.0	8.50		ug/L		85	17 - 158
2-Butanone (MEK)	20.0	25.8		ug/L		129	43 - 149
Carbon disulfide	10.0	13.7		ug/L		137	49 - 141
Carbon tetrachloride	10.0	12.2		ug/L		122	55 - 171
Chlorobenzene	10.0	12.0		ug/L		120	80 - 120
Chloroethane	10.0	5.47		ug/L		55	10 - 149
Chloroform	10.0	11.3		ug/L		113	80 - 120
Chloromethane	10.0	8.74		ug/L		87	59 - 124
1,1-Dichloroethane	10.0	10.7		ug/L		107	74 - 120
1,2-Dichloroethane	10.0	10.9		ug/L		109	68 - 133
1,1-Dichloroethene	10.0	11.9		ug/L		119	65 - 127
1,2-Dichloropropane	10.0	11.6		ug/L		116	78 - 127
cis-1,3-Dichloropropene	10.0	10.7		ug/L		107	75 - 120
trans-1,3-Dichloropropene	10.0	11.3		ug/L		113	67 - 120
Ethylbenzene	10.0	11.8		ug/L		118	80 - 120
2-Hexanone	20.0	24.5		ug/L		122	28 - 169
Methylene Chloride	10.0	11.7		ug/L		117	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	19.6		ug/L		98	53 - 144
Styrene	10.0	12.1		ug/L		121	80 - 121
1,1,2,2-Tetrachloroethane	10.0	13.5	*	ug/L		135	58 - 122
Tetrachloroethene	10.0	10.6		ug/L		106	80 - 122
Toluene	10.0	12.7	*	ug/L		127	78 - 120
Trichloroethene	10.0	10.4		ug/L		104	76 - 124
Vinyl chloride	10.0	9.55		ug/L		96	65 - 124
Xylenes, Total	20.0	23.4		ug/L		117	80 - 120
1,1,1-Trichloroethane	10.0	10.5		ug/L		105	64 - 147
1,1,2-Trichloroethane	10.0	13.1	*	ug/L		131	76 - 121
Cyclohexane	10.0	12.8		ug/L		128	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	10.4		ug/L		104	50 - 130
Ethylene Dibromide	10.0	11.7		ug/L		117	80 - 120
Dichlorodifluoromethane	10.0	12.8		ug/L		128	42 - 141

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-292085/6
Matrix: Water
Analysis Batch: 292085

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	10.0	10.9		ug/L		109	77 - 120
trans-1,2-Dichloroethene	10.0	11.9		ug/L		119	74 - 124
Isopropylbenzene	10.0	11.3		ug/L		113	80 - 128
Methyl acetate	20.0	22.7		ug/L		114	63 - 137
Methyl tert-butyl ether	10.0	8.07		ug/L		81	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.9		ug/L		129	65 - 144
1,2,4-Trichlorobenzene	10.0	8.93		ug/L		89	34 - 141
1,2-Dichlorobenzene	10.0	11.2		ug/L		112	80 - 120
1,3-Dichlorobenzene	10.0	10.8		ug/L		108	80 - 120
1,4-Dichlorobenzene	10.0	10.7		ug/L		107	80 - 120
Trichlorofluoromethane	10.0	11.4		ug/L		114	27 - 176
Chlorodibromomethane	10.0	12.6		ug/L		126	64 - 129
Methylcyclohexane	10.0	12.6		ug/L		126	63 - 141
m-Xylene & p-Xylene	10.0	12.0		ug/L		120	80 - 120
o-Xylene	10.0	11.4		ug/L		114	80 - 120
Naphthalene	10.0	9.16		ug/L		92	31 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		61 - 138
4-Bromofluorobenzene (Surr)	96		69 - 120
Toluene-d8 (Surr)	98		73 - 120
Dibromofluoromethane (Surr)	86		69 - 124

Lab Sample ID: MB 240-292208/6
Matrix: Water
Analysis Batch: 292208

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	1.8	ug/L			08/23/17 12:48	1
Benzene	1.0	U	1.0	0.28	ug/L			08/23/17 12:48	1
Dichlorobromomethane	1.0	U	1.0	0.30	ug/L			08/23/17 12:48	1
Bromoform	1.0	U	1.0	0.43	ug/L			08/23/17 12:48	1
Bromomethane	1.0	U	1.0	0.42	ug/L			08/23/17 12:48	1
2-Butanone (MEK)	10	U	10	1.0	ug/L			08/23/17 12:48	1
Carbon disulfide	1.0	U	1.0	0.34	ug/L			08/23/17 12:48	1
Carbon tetrachloride	1.0	U	1.0	0.35	ug/L			08/23/17 12:48	1
Chlorobenzene	1.0	U	1.0	0.32	ug/L			08/23/17 12:48	1
Chloroethane	1.0	U	1.0	0.41	ug/L			08/23/17 12:48	1
Chloroform	1.0	U	1.0	0.31	ug/L			08/23/17 12:48	1
Chloromethane	1.0	U	1.0	0.43	ug/L			08/23/17 12:48	1
1,1-Dichloroethane	1.0	U	1.0	0.25	ug/L			08/23/17 12:48	1
1,2-Dichloroethane	1.0	U	1.0	0.30	ug/L			08/23/17 12:48	1
1,1-Dichloroethene	1.0	U	1.0	0.27	ug/L			08/23/17 12:48	1
1,2-Dichloropropane	1.0	U	1.0	0.30	ug/L			08/23/17 12:48	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.26	ug/L			08/23/17 12:48	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.31	ug/L			08/23/17 12:48	1
Ethylbenzene	1.0	U	1.0	0.26	ug/L			08/23/17 12:48	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-292208/6
Matrix: Water
Analysis Batch: 292208

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Hexanone	10	U	10	1.2	ug/L			08/23/17 12:48	1
Methylene Chloride	1.0	U	1.0	0.53	ug/L			08/23/17 12:48	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.71	ug/L			08/23/17 12:48	1
Styrene	1.0	U	1.0	0.23	ug/L			08/23/17 12:48	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.32	ug/L			08/23/17 12:48	1
Tetrachloroethene	1.0	U	1.0	0.30	ug/L			08/23/17 12:48	1
Toluene	1.0	U	1.0	0.23	ug/L			08/23/17 12:48	1
Trichloroethene	1.0	U	1.0	0.33	ug/L			08/23/17 12:48	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			08/23/17 12:48	1
Xylenes, Total	2.0	U	2.0	0.24	ug/L			08/23/17 12:48	1
1,1,1-Trichloroethane	1.0	U	1.0	0.23	ug/L			08/23/17 12:48	1
1,1,2-Trichloroethane	1.0	U	1.0	0.34	ug/L			08/23/17 12:48	1
Cyclohexane	1.0	U	1.0	0.44	ug/L			08/23/17 12:48	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.47	ug/L			08/23/17 12:48	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			08/23/17 12:48	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			08/23/17 12:48	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			08/23/17 12:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.29	ug/L			08/23/17 12:48	1
Isopropylbenzene	1.0	U	1.0	0.21	ug/L			08/23/17 12:48	1
Methyl acetate	10	U	10	1.4	ug/L			08/23/17 12:48	1
Methyl tert-butyl ether	1.0	U	1.0	0.27	ug/L			08/23/17 12:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			08/23/17 12:48	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.27	ug/L			08/23/17 12:48	1
1,2-Dichlorobenzene	1.0	U	1.0	0.26	ug/L			08/23/17 12:48	1
1,3-Dichlorobenzene	1.0	U	1.0	0.32	ug/L			08/23/17 12:48	1
1,4-Dichlorobenzene	1.0	U	1.0	0.23	ug/L			08/23/17 12:48	1
Trichlorofluoromethane	1.0	U	1.0	0.50	ug/L			08/23/17 12:48	1
Chlorodibromomethane	1.0	U	1.0	0.25	ug/L			08/23/17 12:48	1
Methylcyclohexane	1.0	U	1.0	0.45	ug/L			08/23/17 12:48	1
Naphthalene	1.0	U	1.0	0.25	ug/L			08/23/17 12:48	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	93		61 - 138		08/23/17 12:48	1
4-Bromofluorobenzene (Surr)	83		69 - 120		08/23/17 12:48	1
Toluene-d8 (Surr)	89		73 - 120		08/23/17 12:48	1
Dibromofluoromethane (Surr)	94		69 - 124		08/23/17 12:48	1

Lab Sample ID: LCS 240-292208/4
Matrix: Water
Analysis Batch: 292208

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Acetone	20.0	17.0		ug/L		85	35 - 131
Benzene	10.0	11.7		ug/L		117	79 - 120
Dichlorobromomethane	10.0	11.7		ug/L		117	79 - 125
Bromoform	10.0	9.64		ug/L		96	55 - 145
Bromomethane	10.0	12.7		ug/L		127	17 - 158
2-Butanone (MEK)	20.0	22.0		ug/L		110	43 - 149

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-292208/4

Matrix: Water

Analysis Batch: 292208

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	10.0	13.6		ug/L		136	49 - 141
Carbon tetrachloride	10.0	12.1		ug/L		121	55 - 171
Chlorobenzene	10.0	11.8		ug/L		118	80 - 120
Chloroethane	10.0	8.35		ug/L		83	10 - 149
Chloroform	10.0	11.1		ug/L		111	80 - 120
Chloromethane	10.0	8.83		ug/L		88	59 - 124
1,1-Dichloroethane	10.0	10.7		ug/L		107	74 - 120
1,2-Dichloroethane	10.0	10.4		ug/L		104	68 - 133
1,1-Dichloroethene	10.0	11.5		ug/L		115	65 - 127
1,2-Dichloropropane	10.0	11.2		ug/L		112	78 - 127
cis-1,3-Dichloropropene	10.0	10.4		ug/L		104	75 - 120
trans-1,3-Dichloropropene	10.0	10.5		ug/L		105	67 - 120
Ethylbenzene	10.0	11.7		ug/L		117	80 - 120
2-Hexanone	20.0	18.5		ug/L		92	28 - 169
Methylene Chloride	10.0	11.7		ug/L		117	64 - 140
4-Methyl-2-pentanone (MIBK)	20.0	15.6		ug/L		78	53 - 144
Styrene	10.0	11.9		ug/L		119	80 - 121
1,1,2,2-Tetrachloroethane	10.0	11.9		ug/L		119	58 - 122
Tetrachloroethene	10.0	10.5		ug/L		105	80 - 122
Toluene	10.0	12.6	*	ug/L		126	78 - 120
Trichloroethene	10.0	10.1		ug/L		101	76 - 124
Vinyl chloride	10.0	9.90		ug/L		99	65 - 124
Xylenes, Total	20.0	22.9		ug/L		115	80 - 120
1,1,1-Trichloroethane	10.0	10.6		ug/L		106	64 - 147
1,1,2-Trichloroethane	10.0	12.4	*	ug/L		124	76 - 121
Cyclohexane	10.0	12.2		ug/L		122	66 - 135
1,2-Dibromo-3-Chloropropane	10.0	8.80		ug/L		88	50 - 130
Ethylene Dibromide	10.0	11.0		ug/L		110	80 - 120
Dichlorodifluoromethane	10.0	12.5		ug/L		125	42 - 141
cis-1,2-Dichloroethene	10.0	10.8		ug/L		108	77 - 120
trans-1,2-Dichloroethene	10.0	11.7		ug/L		117	74 - 124
Isopropylbenzene	10.0	11.2		ug/L		112	80 - 128
Methyl acetate	20.0	19.7		ug/L		99	63 - 137
Methyl tert-butyl ether	10.0	7.68		ug/L		77	73 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.3		ug/L		123	65 - 144
1,2,4-Trichlorobenzene	10.0	8.82		ug/L		88	34 - 141
1,2-Dichlorobenzene	10.0	10.9		ug/L		109	80 - 120
1,3-Dichlorobenzene	10.0	10.7		ug/L		107	80 - 120
1,4-Dichlorobenzene	10.0	10.7		ug/L		107	80 - 120
Trichlorofluoromethane	10.0	12.9		ug/L		129	27 - 176
Chlorodibromomethane	10.0	11.9		ug/L		119	64 - 129
Methylcyclohexane	10.0	11.9		ug/L		119	63 - 141
m-Xylene & p-Xylene	10.0	11.7		ug/L		117	80 - 120
o-Xylene	10.0	11.2		ug/L		112	80 - 120
Naphthalene	10.0	7.80		ug/L		78	31 - 127

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-292208/4

Matrix: Water

Analysis Batch: 292208

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	85		61 - 138
4-Bromofluorobenzene (Surr)	96		69 - 120
Toluene-d8 (Surr)	97		73 - 120
Dibromofluoromethane (Surr)	84		69 - 124

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

GC/MS VOA

Analysis Batch: 292085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83881-1	W-170817-RA-56	Total/NA	Water	8260B	
240-83881-3	W-170817-RA-58	Total/NA	Water	8260B	
240-83881-5	TRIP BLANK	Total/NA	Water	8260B	
MB 240-292085/7	Method Blank	Total/NA	Water	8260B	
LCS 240-292085/6	Lab Control Sample	Total/NA	Water	8260B	

Analysis Batch: 292208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-83881-2	W-170817-RA-57	Total/NA	Water	8260B	
240-83881-4	W-170817-RA-59	Total/NA	Water	8260B	
MB 240-292208/6	Method Blank	Total/NA	Water	8260B	
LCS 240-292208/4	Lab Control Sample	Total/NA	Water	8260B	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Client Sample ID: W-170817-RA-56

Date Collected: 08/17/17 07:45

Date Received: 08/18/17 09:15

Lab Sample ID: 240-83881-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		500	292085	08/22/17 20:04	LRW	TAL CAN

Client Sample ID: W-170817-RA-57

Date Collected: 08/17/17 08:30

Date Received: 08/18/17 09:15

Lab Sample ID: 240-83881-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1250	292208	08/23/17 14:22	LRW	TAL CAN

Client Sample ID: W-170817-RA-58

Date Collected: 08/17/17 13:35

Date Received: 08/18/17 09:15

Lab Sample ID: 240-83881-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		11.11	292085	08/22/17 20:51	LRW	TAL CAN

Client Sample ID: W-170817-RA-59

Date Collected: 08/17/17 14:05

Date Received: 08/18/17 09:15

Lab Sample ID: 240-83881-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		500	292208	08/23/17 14:45	LRW	TAL CAN

Client Sample ID: TRIP BLANK

Date Collected: 08/17/17 00:00

Date Received: 08/18/17 09:15

Lab Sample ID: 240-83881-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	292085	08/22/17 21:37	LRW	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 88751, Hinshaw & Culbertson

TestAmerica Job ID: 240-83881-1

Laboratory: TestAmerica Canton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Minnesota	NELAP	5	039-999-348	12-31-17 *

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* Accreditation/Certification renewal pending - accreditation/certification considered valid.



CONESTOGA-ROVERS & ASSOCIATES

3.7/3.7

CHAIN OF CUSTODY RECORD

1801 Old Highway 8 Northwest, Suite 114
St. Paul, Minnesota 55112 United States

Phone: (651) 639-0913 Fax: (651) 639-0923

COC NO.: **SP-02441**

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 88751-40			Laboratory Name: Test America				Lab Location:			SSOW ID:								
Project Name: 86714 Walker St			Lab Contact:				Lab Quote No:			Cooler No:								
Project Location: SLP			CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)			Carrier:								
Chemistry Contact: G Anderson			Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	MS/MSD Request	Airbill No:			
Sampler(s): P. Amot															Date Shipped:			
Item	SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)	DATE (mm/dd/yy)	TIME (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	MS/MSD Request	COMMENTS/ SPECIAL INSTRUCTIONS:		
1	W-170817-1A-56	8/17/17	745	W	G		3							3				
2	W-170817-1A-57		830	W	G		3							3				
3	W-170817-1A-58		1335	W	G		3							3				
4	W-170817-1A-59		1405	W	G		3							3				
trip blank																		
<div style="text-align: right;">  240-83881 Chain of Custody </div>																		
TAT Required in business days (use separate COCs for different TATs): <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input type="checkbox"/> Other:						Total Number of Containers: 13			Notes/ Special Requirements:									
All Samples in Cooler must be on COC																		
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY		COMPANY	DATE	TIME										
1.	CRA	8/17/17	1600	1. POP		TAL	8-16-17	915										
2.				2.														
3.				3.														

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE - Fully Executed Copy (CRA) YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampling Crew CRA Form: COC-10A (20110804)



8/25/2017

TestAmerica Canton Sample Receipt Form/Narrative

Login #: 83861

Canton Facility

Client CRA Site Name

Cooler unpacked by:

Cooler Received on 8-18-17 Opened on 8-18-17

POB

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time

Storage Location

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

- 1. Cooler temperature upon receipt
IR GUN# IR-8 (CF -0.4 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C
IR GUN #36 (CF +0°C) Observed Cooler Temp. 3.7 °C Corrected Cooler Temp. 3.7 °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/McHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
If yes, Questions 11-15 have been checked at the originating laboratory.
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC697954
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # COVERED Yes No
15. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM Date by via Verbal Voice Mail Other

Concerning

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

17. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-31467-1
Client Project/Site: 088751,6714 Walker St

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson



Authorized for release by:
9/27/2017 8:53:14 AM

Laura Turpen, Project Manager I
(916)374-4414
laura.turpen@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Job ID: 320-31467-1

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative 320-31467-1

Receipt

The samples were received on 9/12/2017 9:30 AM; the samples arrived in good condition.

Receipt Exceptions

The following samples were received with the valve knob unattached to the canister: G-170906-RA-07 (320-31467-26) and G-170907-RA-27 (320-31467-36).

Box 1 of 2 was received with the side broken open. No sample containers or valves were lost.

The canister ID for sample CSS-170906-RA-01 (320-31467-1) is listed on the COC as 3318, but the actual ID is 8318. This ID is used only for internal tracking.

Air - GC/MS VOA

The canister for sample 320-31467-A-16(#34000234), was received at -24.80"Hg, which are considered insufficient sample pressure and will require pressurization greater than the SOP stipulates. As a result, the data will be reported at a higher dilution and reporting limits will be raised accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-01

Lab Sample ID: 320-31467-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	43		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	1.5		0.40	ppb v/v	1		TO-15	Total/NA
Bromodichloromethane	0.42		0.30	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.8		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	12		0.80	ppb v/v	1		TO-15	Total/NA
Chlorobenzene	0.40		0.30	ppb v/v	1		TO-15	Total/NA
Chloroform	0.53		0.30	ppb v/v	1		TO-15	Total/NA
Chloromethane	1.1		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.66		0.40	ppb v/v	1		TO-15	Total/NA
1,1-Dichloroethane	1.2		0.30	ppb v/v	1		TO-15	Total/NA
1,1-Dichloroethene	3.9		0.80	ppb v/v	1		TO-15	Total/NA
cis-1,2-Dichloroethene	10		0.40	ppb v/v	1		TO-15	Total/NA
trans-1,2-Dichloroethene	0.55		0.40	ppb v/v	1		TO-15	Total/NA
1,2-Dichloropropane	0.44		0.40	ppb v/v	1		TO-15	Total/NA
cis-1,3-Dichloropropene	0.44		0.40	ppb v/v	1		TO-15	Total/NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.45		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	1.3		0.40	ppb v/v	1		TO-15	Total/NA
4-Ethyltoluene	0.48		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	4.9		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	1.1		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	2.6		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	12		0.40	ppb v/v	1		TO-15	Total/NA
1,1,1-Trichloroethane	1.8		0.30	ppb v/v	1		TO-15	Total/NA
Trichloroethene	2.8		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	1.5		0.40	ppb v/v	1		TO-15	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	0.59		0.40	ppb v/v	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.43		0.40	ppb v/v	1		TO-15	Total/NA
Vinyl chloride	1.6		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	3.6		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	1.3		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	100		12	ug/m3	1		TO-15	Total/NA
Benzene	4.9		1.3	ug/m3	1		TO-15	Total/NA
Bromodichloromethane	2.8		2.0	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	8.2		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	39		2.5	ug/m3	1		TO-15	Total/NA
Chlorobenzene	1.8		1.4	ug/m3	1		TO-15	Total/NA
Chloroform	2.6		1.5	ug/m3	1		TO-15	Total/NA
Chloromethane	2.3		1.7	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	3.2		2.0	ug/m3	1		TO-15	Total/NA
1,1-Dichloroethane	4.7		1.2	ug/m3	1		TO-15	Total/NA
1,1-Dichloroethene	16		3.2	ug/m3	1		TO-15	Total/NA
cis-1,2-Dichloroethene	41		1.6	ug/m3	1		TO-15	Total/NA
trans-1,2-Dichloroethene	2.2		1.6	ug/m3	1		TO-15	Total/NA
1,2-Dichloropropane	2.0		1.8	ug/m3	1		TO-15	Total/NA
cis-1,3-Dichloropropene	2.0		1.8	ug/m3	1		TO-15	Total/NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane	3.1		2.8	ug/m3	1		TO-15	Total/NA
Ethylbenzene	5.4		1.7	ug/m3	1		TO-15	Total/NA
4-Ethyltoluene	2.4		2.0	ug/m3	1		TO-15	Total/NA
Methylene Chloride	17		1.4	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-01 (Continued)

Lab Sample ID: 320-31467-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
4-Methyl-2-pentanone (MIBK)	4.4		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	18		2.7	ug/m3	1		TO-15	Total/NA
Toluene	44		1.5	ug/m3	1		TO-15	Total/NA
1,1,1-Trichloroethane	10		1.6	ug/m3	1		TO-15	Total/NA
Trichloroethene	15		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	8.2		2.2	ug/m3	1		TO-15	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	4.6		3.1	ug/m3	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	2.1		2.0	ug/m3	1		TO-15	Total/NA
Vinyl chloride	4.2		1.0	ug/m3	1		TO-15	Total/NA
m,p-Xylene	15		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	5.5		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: SS-170906-RA-02

Lab Sample ID: 320-31467-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	35		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.84		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.9		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	2.6		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.41		0.40	ppb v/v	1		TO-15	Total/NA
cis-1,2-Dichloroethene	0.74		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	1.2		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	1.0		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	2.6		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	2.0		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	6.2		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.63		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.59		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	3.8		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	1.3		0.40	ppb v/v	1		TO-15	Total/NA

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	84		12	ug/m3	1		TO-15	Total/NA
Benzene	2.7		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	8.5		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	8.0		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	2.0		2.0	ug/m3	1		TO-15	Total/NA
cis-1,2-Dichloroethene	2.9		1.6	ug/m3	1		TO-15	Total/NA
Ethylbenzene	5.4		1.7	ug/m3	1		TO-15	Total/NA
Methylene Chloride	3.5		1.4	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	10		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	14		2.7	ug/m3	1		TO-15	Total/NA
Toluene	23		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	3.4		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	3.3		2.2	ug/m3	1		TO-15	Total/NA
m,p-Xylene	16		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	5.5		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: SS-170906-RA-03

Lab Sample ID: 320-31467-3

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-03 (Continued)

Lab Sample ID: 320-31467-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	49		12	ppb v/v	2.38		TO-15	Total/NA
Benzene	1.0		0.95	ppb v/v	2.38		TO-15	Total/NA
2-Butanone (MEK)	1.9		1.9	ppb v/v	2.38		TO-15	Total/NA
Carbon disulfide	2.2		1.9	ppb v/v	2.38		TO-15	Total/NA
Methylene Chloride	2.2		0.95	ppb v/v	2.38		TO-15	Total/NA
Tetrachloroethene	1.7		0.95	ppb v/v	2.38		TO-15	Total/NA
Toluene	7.6		0.95	ppb v/v	2.38		TO-15	Total/NA
Trichlorofluoromethane	0.99		0.95	ppb v/v	2.38		TO-15	Total/NA
m,p-Xylene	2.7		1.9	ppb v/v	2.38		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	120		28	ug/m3	2.38		TO-15	Total/NA
Benzene	3.3		3.0	ug/m3	2.38		TO-15	Total/NA
2-Butanone (MEK)	5.5		5.6	ug/m3	2.38		TO-15	Total/NA
Carbon disulfide	6.9		5.9	ug/m3	2.38		TO-15	Total/NA
Methylene Chloride	7.8		3.3	ug/m3	2.38		TO-15	Total/NA
Tetrachloroethene	12		6.5	ug/m3	2.38		TO-15	Total/NA
Toluene	29		3.6	ug/m3	2.38		TO-15	Total/NA
Trichlorofluoromethane	5.6		5.3	ug/m3	2.38		TO-15	Total/NA
m,p-Xylene	12		8.3	ug/m3	2.38		TO-15	Total/NA

Client Sample ID: SS-170906-RA-04

Lab Sample ID: 320-31467-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	120		33	ppb v/v	6.54		TO-15	Total/NA
Tetrachloroethene	6.1		2.6	ppb v/v	6.54		TO-15	Total/NA
Toluene	8.3		2.6	ppb v/v	6.54		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	280		78	ug/m3	6.54		TO-15	Total/NA
Tetrachloroethene	41		18	ug/m3	6.54		TO-15	Total/NA
Toluene	31		9.9	ug/m3	6.54		TO-15	Total/NA

Client Sample ID: SS-170906-RA-05

Lab Sample ID: 320-31467-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	23		5.0	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	1.5		0.80	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	1.2		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.46		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	54		12	ug/m3	1		TO-15	Total/NA
Carbon disulfide	4.8		2.5	ug/m3	1		TO-15	Total/NA
Methylene Chloride	4.3		1.4	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	2.6		2.2	ug/m3	1		TO-15	Total/NA

Client Sample ID: SS-170906-RA-06

Lab Sample ID: 320-31467-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	19		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.79		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	5.3		0.80	ppb v/v	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-06 (Continued)

Lab Sample ID: 320-31467-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	4.8		0.80	ppb v/v	1		TO-15	Total/NA
Chloroform	0.43		0.30	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.88		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	1.6		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	6.9		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	8.7		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	3.1		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	11		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.76		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	1.0		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	3.9		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	1.2		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	44		12	ug/m3	1		TO-15	Total/NA
Benzene	2.5		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	16		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	15		2.5	ug/m3	1		TO-15	Total/NA
Chloroform	2.1		1.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	4.4		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	6.8		1.7	ug/m3	1		TO-15	Total/NA
Methylene Chloride	24		1.4	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	35		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	21		2.7	ug/m3	1		TO-15	Total/NA
Toluene	42		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	4.1		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	5.8		2.2	ug/m3	1		TO-15	Total/NA
m,p-Xylene	17		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	5.3		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: SS-170906-RA-07

Lab Sample ID: 320-31467-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	34		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.46		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.8		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	2.0		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	4.8		0.40	ppb v/v	1		TO-15	Total/NA
cis-1,2-Dichloroethene	1.1		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.56		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	2.0		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	0.50		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	5.4		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	5.9		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.53		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.49		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	2.0		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	0.78		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	80		12	ug/m3	1		TO-15	Total/NA
Benzene	1.5		1.3	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-07 (Continued)

Lab Sample ID: 320-31467-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	8.1		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	6.2		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	24		2.0	ug/m3	1		TO-15	Total/NA
cis-1,2-Dichloroethene	4.6		1.6	ug/m3	1		TO-15	Total/NA
Ethylbenzene	2.4		1.7	ug/m3	1		TO-15	Total/NA
Methylene Chloride	7.1		1.4	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	2.1		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	37		2.7	ug/m3	1		TO-15	Total/NA
Toluene	22		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	2.8		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	2.8		2.2	ug/m3	1		TO-15	Total/NA
m,p-Xylene	8.8		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	3.4		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: SS-170906-RA-08

Lab Sample ID: 320-31467-8

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	9.7		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.44		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	0.88		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	6.1		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.58		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.57		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	10		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	18		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	6.2		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	1.3		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.93		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	1.3		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	0.42		0.40	ppb v/v	1		TO-15	Total/NA

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	23		12	ug/m3	1		TO-15	Total/NA
Benzene	1.4		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	2.6		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	19		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	2.9		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	2.5		1.7	ug/m3	1		TO-15	Total/NA
Methylene Chloride	36		1.4	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	120		2.7	ug/m3	1		TO-15	Total/NA
Toluene	23		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	6.9		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	5.2		2.2	ug/m3	1		TO-15	Total/NA
m,p-Xylene	5.7		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	1.8		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: SS-170906-RA-09

Lab Sample ID: 320-31467-9

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	24		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.78		0.40	ppb v/v	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-09 (Continued)

Lab Sample ID: 320-31467-9

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	2.5		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	39		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.53		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.76		0.40	ppb v/v	1		TO-15	Total/NA
4-Ethyltoluene	1.1		0.40	ppb v/v	1		TO-15	Total/NA
2-Hexanone	0.42		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	3.3		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	0.92		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	80		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	7.0		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.84		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.78		0.40	ppb v/v	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	1.0		0.80	ppb v/v	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.61		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	2.8		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	1.2		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	57		12	ug/m3	1		TO-15	Total/NA
Benzene	2.5		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	7.3		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	120		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	2.6		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	3.3		1.7	ug/m3	1		TO-15	Total/NA
4-Ethyltoluene	5.4		2.0	ug/m3	1		TO-15	Total/NA
2-Hexanone	1.7		1.6	ug/m3	1		TO-15	Total/NA
Methylene Chloride	12		1.4	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	3.8		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	540		2.7	ug/m3	1		TO-15	Total/NA
Toluene	27		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	4.5		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	4.4		2.2	ug/m3	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	4.9		3.9	ug/m3	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	3.0		2.0	ug/m3	1		TO-15	Total/NA
m,p-Xylene	12		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	5.2		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-11

Lab Sample ID: 320-31467-10

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	6.7		5.0	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	0.83		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	5.9		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	6.7		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.57		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	20		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	2.8		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	1.1		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	1.5		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	0.42		0.40	ppb v/v	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-11 (Continued)

Lab Sample ID: 320-31467-10

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	16		12	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	2.4		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	18		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	33		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	2.5		1.7	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	140		2.7	ug/m3	1		TO-15	Total/NA
Toluene	11		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	5.9		2.1	ug/m3	1		TO-15	Total/NA
m,p-Xylene	6.7		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	1.8		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-12

Lab Sample ID: 320-31467-11

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	13		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.44		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.2		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	11		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	15		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.77		0.40	ppb v/v	1		TO-15	Total/NA
2-Hexanone	0.59		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	29		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	2.5		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.86		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	2.2		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	0.98		0.40	ppb v/v	1		TO-15	Total/NA

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	31		12	ug/m3	1		TO-15	Total/NA
Benzene	1.4		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	6.6		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	35		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	76		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	3.3		1.7	ug/m3	1		TO-15	Total/NA
2-Hexanone	2.4		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	200		2.7	ug/m3	1		TO-15	Total/NA
Toluene	9.4		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	4.6		2.1	ug/m3	1		TO-15	Total/NA
m,p-Xylene	9.5		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	4.2		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-13

Lab Sample ID: 320-31467-12

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	16		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.94		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.1		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	3.4		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.62		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	1.3		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	0.50		0.40	ppb v/v	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-13 (Continued)

Lab Sample ID: 320-31467-12

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
4-Methyl-2-pentanone (MIBK)	0.86		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	14		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	6.1		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.80		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.49		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	4.3		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	1.3		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	38		12	ug/m3	1		TO-15	Total/NA
Benzene	3.0		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	6.2		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	11		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	3.1		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	5.6		1.7	ug/m3	1		TO-15	Total/NA
Methylene Chloride	1.7		1.4	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	3.5		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	93		2.7	ug/m3	1		TO-15	Total/NA
Toluene	23		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	4.3		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	2.8		2.2	ug/m3	1		TO-15	Total/NA
m,p-Xylene	19		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	5.9		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-14

Lab Sample ID: 320-31467-13

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	18		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.80		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.0		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	3.2		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.49		0.40	ppb v/v	1		TO-15	Total/NA
cis-1,2-Dichloroethene	1.9		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.59		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	0.61		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	1.1		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	8.2		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.92		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.40		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	1.1		0.80	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	44		12	ug/m3	1		TO-15	Total/NA
Benzene	2.6		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	6.0		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	9.9		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	2.4		2.0	ug/m3	1		TO-15	Total/NA
cis-1,2-Dichloroethene	7.4		1.6	ug/m3	1		TO-15	Total/NA
Ethylbenzene	2.6		1.7	ug/m3	1		TO-15	Total/NA
Methylene Chloride	2.1		1.4	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	7.3		2.7	ug/m3	1		TO-15	Total/NA
Toluene	31		1.5	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-14 (Continued)

Lab Sample ID: 320-31467-13

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	4.9		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	2.2		2.2	ug/m3	1		TO-15	Total/NA
m,p-Xylene	4.6		3.5	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-15

Lab Sample ID: 320-31467-14

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	21		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	1.0		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	1.3		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	1.0		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	3.4		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.90		0.40	ppb v/v	1		TO-15	Total/NA
4-Ethyltoluene	0.45		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	0.40		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	4.8		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	4.5		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.83		0.40	ppb v/v	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	1.3		0.80	ppb v/v	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.40		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	3.6		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	1.3		0.40	ppb v/v	1		TO-15	Total/NA

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	49		12	ug/m3	1		TO-15	Total/NA
Benzene	3.3		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	4.0		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	3.2		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	17		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	3.9		1.7	ug/m3	1		TO-15	Total/NA
4-Ethyltoluene	2.2		2.0	ug/m3	1		TO-15	Total/NA
Methylene Chloride	1.4		1.4	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	32		2.7	ug/m3	1		TO-15	Total/NA
Toluene	17		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	4.5		2.1	ug/m3	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	6.4		3.9	ug/m3	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	2.0		2.0	ug/m3	1		TO-15	Total/NA
m,p-Xylene	16		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	5.7		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-16

Lab Sample ID: 320-31467-15

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	24		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	1.0		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	4.7		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	8.1		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	17		0.40	ppb v/v	1		TO-15	Total/NA
cis-1,2-Dichloroethene	0.54		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	1.7		0.40	ppb v/v	1		TO-15	Total/NA
4-Ethyltoluene	0.52		0.40	ppb v/v	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-16 (Continued)

Lab Sample ID: 320-31467-15

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.67		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	3.2		0.40	ppb v/v	1		TO-15	Total/NA
Styrene	0.70		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	6.7		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	9.8		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	1.3		0.40	ppb v/v	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	1.3		0.80	ppb v/v	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.44		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	5.5		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	2.1		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	57		12	ug/m3	1		TO-15	Total/NA
Benzene	3.2		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	14		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	25		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	83		2.0	ug/m3	1		TO-15	Total/NA
cis-1,2-Dichloroethene	2.2		1.6	ug/m3	1		TO-15	Total/NA
Ethylbenzene	7.2		1.7	ug/m3	1		TO-15	Total/NA
4-Ethyltoluene	2.5		2.0	ug/m3	1		TO-15	Total/NA
Methylene Chloride	2.3		1.4	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	13		1.6	ug/m3	1		TO-15	Total/NA
Styrene	3.0		1.7	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	45		2.7	ug/m3	1		TO-15	Total/NA
Toluene	37		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	6.8		2.1	ug/m3	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	6.5		3.9	ug/m3	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	2.1		2.0	ug/m3	1		TO-15	Total/NA
m,p-Xylene	24		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	9.0		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-17

Lab Sample ID: 320-31467-16

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	79		14	ppb v/v	2.77		TO-15	Total/NA
Benzene	1.6		1.1	ppb v/v	2.77		TO-15	Total/NA
2-Butanone (MEK)	5.6		2.2	ppb v/v	2.77		TO-15	Total/NA
Carbon disulfide	70		2.2	ppb v/v	2.77		TO-15	Total/NA
Dichlorodifluoromethane	8.6		1.1	ppb v/v	2.77		TO-15	Total/NA
Ethylbenzene	2.6		1.1	ppb v/v	2.77		TO-15	Total/NA
Methylene Chloride	2.1		1.1	ppb v/v	2.77		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	1.7		1.1	ppb v/v	2.77		TO-15	Total/NA
Tetrachloroethene	7.3		1.1	ppb v/v	2.77		TO-15	Total/NA
Toluene	15		1.1	ppb v/v	2.77		TO-15	Total/NA
Trichloroethene	2.7		1.1	ppb v/v	2.77		TO-15	Total/NA
m,p-Xylene	9.2		2.2	ppb v/v	2.77		TO-15	Total/NA
o-Xylene	3.2		1.1	ppb v/v	2.77		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	190		33	ug/m3	2.77		TO-15	Total/NA
Benzene	5.1		3.5	ug/m3	2.77		TO-15	Total/NA
2-Butanone (MEK)	16		6.5	ug/m3	2.77		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-17 (Continued)

Lab Sample ID: 320-31467-16

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	220		6.9	ug/m3	2.77		TO-15	Total/NA
Dichlorodifluoromethane	42		5.5	ug/m3	2.77		TO-15	Total/NA
Ethylbenzene	11		4.8	ug/m3	2.77		TO-15	Total/NA
Methylene Chloride	7.5		3.8	ug/m3	2.77		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	7.0		4.5	ug/m3	2.77		TO-15	Total/NA
Tetrachloroethene	49		7.5	ug/m3	2.77		TO-15	Total/NA
Toluene	55		4.2	ug/m3	2.77		TO-15	Total/NA
Trichloroethene	15		6.0	ug/m3	2.77		TO-15	Total/NA
m,p-Xylene	40		9.6	ug/m3	2.77		TO-15	Total/NA
o-Xylene	14		4.8	ug/m3	2.77		TO-15	Total/NA

Client Sample ID: G-170907-RA-18

Lab Sample ID: 320-31467-17

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	25		5.0	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	7.2		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	4.0		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	1.5		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	1.8		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	0.91		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	0.55		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	4.5		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	3.7		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.56		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	7.0		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	3.0		0.40	ppb v/v	1		TO-15	Total/NA

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	59		12	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	21		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	13		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	7.4		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	7.8		1.7	ug/m3	1		TO-15	Total/NA
Methylene Chloride	3.2		1.4	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	2.3		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	31		2.7	ug/m3	1		TO-15	Total/NA
Toluene	14		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	3.0		2.1	ug/m3	1		TO-15	Total/NA
m,p-Xylene	30		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	13		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-19

Lab Sample ID: 320-31467-18

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	19		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.40		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.2		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	6.4		0.80	ppb v/v	1		TO-15	Total/NA
Chloromethane	1.5		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.68		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	3.6		0.40	ppb v/v	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-19 (Continued)

Lab Sample ID: 320-31467-18

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
4-Ethyltoluene	0.43		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	1.5		0.40	ppb v/v	1		TO-15	Total/NA
Styrene	0.45		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	5.5		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	3.3		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.47		0.40	ppb v/v	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	2.3		0.80	ppb v/v	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.94		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	16		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	7.5		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	45		12	ug/m3	1		TO-15	Total/NA
Benzene	1.3		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	6.6		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	20		2.5	ug/m3	1		TO-15	Total/NA
Chloromethane	3.1		1.7	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	3.4		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	16		1.7	ug/m3	1		TO-15	Total/NA
4-Ethyltoluene	2.1		2.0	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	6.0		1.6	ug/m3	1		TO-15	Total/NA
Styrene	1.9		1.7	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	37		2.7	ug/m3	1		TO-15	Total/NA
Toluene	12		1.5	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	2.6		2.2	ug/m3	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	11		3.9	ug/m3	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	4.6		2.0	ug/m3	1		TO-15	Total/NA
m,p-Xylene	70		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	33		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-20

Lab Sample ID: 320-31467-19

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	16		5.0	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.3		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	19		0.80	ppb v/v	1		TO-15	Total/NA
Carbon tetrachloride	1.7		0.80	ppb v/v	1		TO-15	Total/NA
Chloroform	7.4		0.30	ppb v/v	1		TO-15	Total/NA
1,4-Dichlorobenzene	0.40		0.40	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	39		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	3.6		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	2.4		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	7.7		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	3.6		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.43		0.40	ppb v/v	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	1.0		0.80	ppb v/v	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.53		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	15		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	6.7		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	39		12	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-20 (Continued)

Lab Sample ID: 320-31467-19

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	6.8		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	59		2.5	ug/m3	1		TO-15	Total/NA
Carbon tetrachloride	10		5.0	ug/m3	1		TO-15	Total/NA
Chloroform	36		1.5	ug/m3	1		TO-15	Total/NA
1,4-Dichlorobenzene	2.4		2.4	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	190		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	16		1.7	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	9.7		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	52		2.7	ug/m3	1		TO-15	Total/NA
Toluene	14		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	2.3		2.1	ug/m3	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	4.9		3.9	ug/m3	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	2.6		2.0	ug/m3	1		TO-15	Total/NA
m,p-Xylene	65		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	29		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170906-RA-01

Lab Sample ID: 320-31467-20

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	32		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	1.5		0.40	ppb v/v	1		TO-15	Total/NA
Bromodichloromethane	0.69		0.30	ppb v/v	1		TO-15	Total/NA
Bromoform	0.69		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	3.5		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	5.3		0.80	ppb v/v	1		TO-15	Total/NA
Carbon tetrachloride	0.82		0.80	ppb v/v	1		TO-15	Total/NA
Chlorobenzene	1.0		0.30	ppb v/v	1		TO-15	Total/NA
Dibromochloromethane	0.67		0.40	ppb v/v	1		TO-15	Total/NA
Chloroform	0.75		0.30	ppb v/v	1		TO-15	Total/NA
Chloromethane	1.1		0.80	ppb v/v	1		TO-15	Total/NA
1,2-Dichlorobenzene	2.5		0.40	ppb v/v	1		TO-15	Total/NA
1,3-Dichlorobenzene	0.78		0.40	ppb v/v	1		TO-15	Total/NA
1,4-Dichlorobenzene	3.0		0.40	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	1.4		0.40	ppb v/v	1		TO-15	Total/NA
1,1-Dichloroethane	0.68		0.30	ppb v/v	1		TO-15	Total/NA
cis-1,2-Dichloroethene	0.84		0.40	ppb v/v	1		TO-15	Total/NA
trans-1,2-Dichloroethene	0.75		0.40	ppb v/v	1		TO-15	Total/NA
1,2-Dichloropropane	0.70		0.40	ppb v/v	1		TO-15	Total/NA
cis-1,3-Dichloropropene	0.70		0.40	ppb v/v	1		TO-15	Total/NA
trans-1,3-Dichloropropene	0.69		0.40	ppb v/v	1		TO-15	Total/NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.79		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	1.8		0.40	ppb v/v	1		TO-15	Total/NA
4-Ethyltoluene	1.1		0.40	ppb v/v	1		TO-15	Total/NA
2-Hexanone	0.89		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	1.9		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	1.1		0.40	ppb v/v	1		TO-15	Total/NA
Styrene	0.84		0.40	ppb v/v	1		TO-15	Total/NA
1,1,2,2-Tetrachloroethane	0.69		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	4.6		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	7.7		0.40	ppb v/v	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-01 (Continued)

Lab Sample ID: 320-31467-20

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.71		0.30	ppb v/v	1		TO-15	Total/NA
1,1,2-Trichloroethane	0.67		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	1.7		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	1.6		0.40	ppb v/v	1		TO-15	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	0.79		0.40	ppb v/v	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	2.2		0.80	ppb v/v	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	1.1		0.40	ppb v/v	1		TO-15	Total/NA
Vinyl chloride	0.66		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	5.2		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	2.2		0.40	ppb v/v	1		TO-15	Total/NA
Naphthalene	0.99		0.80	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	77		12	ug/m3	1		TO-15	Total/NA
Benzene	4.7		1.3	ug/m3	1		TO-15	Total/NA
Bromodichloromethane	4.6		2.0	ug/m3	1		TO-15	Total/NA
Bromoform	7.2		4.1	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	10		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	16		2.5	ug/m3	1		TO-15	Total/NA
Carbon tetrachloride	5.1		5.0	ug/m3	1		TO-15	Total/NA
Chlorobenzene	4.8		1.4	ug/m3	1		TO-15	Total/NA
Dibromochloromethane	5.7		3.4	ug/m3	1		TO-15	Total/NA
Chloroform	3.7		1.5	ug/m3	1		TO-15	Total/NA
Chloromethane	2.2		1.7	ug/m3	1		TO-15	Total/NA
1,2-Dichlorobenzene	15		2.4	ug/m3	1		TO-15	Total/NA
1,3-Dichlorobenzene	4.7		2.4	ug/m3	1		TO-15	Total/NA
1,4-Dichlorobenzene	18		2.4	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	6.8		2.0	ug/m3	1		TO-15	Total/NA
1,1-Dichloroethane	2.7		1.2	ug/m3	1		TO-15	Total/NA
cis-1,2-Dichloroethene	3.3		1.6	ug/m3	1		TO-15	Total/NA
trans-1,2-Dichloroethene	3.0		1.6	ug/m3	1		TO-15	Total/NA
1,2-Dichloropropane	3.2		1.8	ug/m3	1		TO-15	Total/NA
cis-1,3-Dichloropropene	3.2		1.8	ug/m3	1		TO-15	Total/NA
trans-1,3-Dichloropropene	3.1		1.8	ug/m3	1		TO-15	Total/NA
1,2-Dichloro-1,1,2,2-tetrafluoroethane	5.5		2.8	ug/m3	1		TO-15	Total/NA
Ethylbenzene	7.7		1.7	ug/m3	1		TO-15	Total/NA
4-Ethyltoluene	5.4		2.0	ug/m3	1		TO-15	Total/NA
2-Hexanone	3.6		1.6	ug/m3	1		TO-15	Total/NA
Methylene Chloride	6.6		1.4	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	4.6		1.6	ug/m3	1		TO-15	Total/NA
Styrene	3.6		1.7	ug/m3	1		TO-15	Total/NA
1,1,2,2-Tetrachloroethane	4.8		2.7	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	31		2.7	ug/m3	1		TO-15	Total/NA
Toluene	29		1.5	ug/m3	1		TO-15	Total/NA
1,1,1-Trichloroethane	3.9		1.6	ug/m3	1		TO-15	Total/NA
1,1,2-Trichloroethane	3.7		2.2	ug/m3	1		TO-15	Total/NA
Trichloroethene	9.3		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	9.0		2.2	ug/m3	1		TO-15	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	6.1		3.1	ug/m3	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	11		3.9	ug/m3	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	5.5		2.0	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-01 (Continued)

Lab Sample ID: 320-31467-20

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	1.7		1.0	ug/m3	1		TO-15	Total/NA
m,p-Xylene	23		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	9.4		1.7	ug/m3	1		TO-15	Total/NA
Naphthalene	5.2		4.2	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170906-RA-02

Lab Sample ID: 320-31467-21

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	0.89		0.80	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	0.69		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	2.8		2.5	ug/m3	1		TO-15	Total/NA
Methylene Chloride	2.4		1.4	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170906-RA-03

Lab Sample ID: 320-31467-22

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	19		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.42		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	3.3		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	5.0		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.71		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.99		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	0.69		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	3.2		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	7.2		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	5.3		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	1.9		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.52		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	2.8		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	0.93		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	45		12	ug/m3	1		TO-15	Total/NA
Benzene	1.3		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	9.6		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	16		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	3.5		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	4.3		1.7	ug/m3	1		TO-15	Total/NA
Methylene Chloride	2.4		1.4	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	13		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	49		2.7	ug/m3	1		TO-15	Total/NA
Toluene	20		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	10		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	2.9		2.2	ug/m3	1		TO-15	Total/NA
m,p-Xylene	12		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	4.0		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170906-RA-04

Lab Sample ID: 320-31467-23

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-04 (Continued)

Lab Sample ID: 320-31467-23

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	17		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.43		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.6		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	2.8		0.80	ppb v/v	1		TO-15	Total/NA
Chloroform	1.7		0.30	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.65		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	1.1		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	12		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	4.2		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	3.3		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.47		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	40		12	ug/m3	1		TO-15	Total/NA
Benzene	1.4		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	7.7		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	8.6		2.5	ug/m3	1		TO-15	Total/NA
Chloroform	8.3		1.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	3.2		2.0	ug/m3	1		TO-15	Total/NA
Methylene Chloride	3.8		1.4	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	81		2.7	ug/m3	1		TO-15	Total/NA
Toluene	16		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	18		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	2.6		2.2	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170906-RA-05

Lab Sample ID: 320-31467-24

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	18		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.59		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	2.1		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	8.8		0.80	ppb v/v	1		TO-15	Total/NA
Chloroform	1.1		0.30	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.56		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	1.1		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	0.94		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	0.40		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	49		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	12		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	4.2		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.43		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	2.2		0.80	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	42		12	ug/m3	1		TO-15	Total/NA
Benzene	1.9		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	6.1		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	27		2.5	ug/m3	1		TO-15	Total/NA
Chloroform	5.1		1.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	2.8		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	5.0		1.7	ug/m3	1		TO-15	Total/NA
Methylene Chloride	3.3		1.4	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-05 (Continued)

Lab Sample ID: 320-31467-24

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
4-Methyl-2-pentanone (MIBK)	1.6		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	330		2.7	ug/m3	1		TO-15	Total/NA
Toluene	46		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	22		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	2.4		2.2	ug/m3	1		TO-15	Total/NA
m,p-Xylene	9.5		3.5	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170906-RA-06

Lab Sample ID: 320-31467-25

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	21		5.0	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	3.2		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	2.1		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	1.0		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	1.3		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	3.3		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.77		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	50		12	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	9.3		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	6.7		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	4.9		2.0	ug/m3	1		TO-15	Total/NA
Methylene Chloride	4.6		1.4	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	23		2.7	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	4.3		2.2	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170906-RA-07

Lab Sample ID: 320-31467-26

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	5.5		4.3	ppb v/v	5.4		TO-15	Total/NA
Chloroethane	32		4.3	ppb v/v	5.4		TO-15	Total/NA
Chloroform	2.2		1.6	ppb v/v	5.4		TO-15	Total/NA
Chloromethane	110		4.3	ppb v/v	5.4		TO-15	Total/NA
Dichlorodifluoromethane	8.4		2.2	ppb v/v	5.4		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	5.8		2.2	ppb v/v	5.4		TO-15	Total/NA
Tetrachloroethene	280		2.2	ppb v/v	5.4		TO-15	Total/NA
Toluene	4.1		2.2	ppb v/v	5.4		TO-15	Total/NA
Trichloroethene	5.2		2.2	ppb v/v	5.4		TO-15	Total/NA
m,p-Xylene	4.9		4.3	ppb v/v	5.4		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	17		13	ug/m3	5.4		TO-15	Total/NA
Chloroethane	84		11	ug/m3	5.4		TO-15	Total/NA
Chloroform	11		7.9	ug/m3	5.4		TO-15	Total/NA
Chloromethane	220		8.9	ug/m3	5.4		TO-15	Total/NA
Dichlorodifluoromethane	42		11	ug/m3	5.4		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	24		8.8	ug/m3	5.4		TO-15	Total/NA
Tetrachloroethene	1900		15	ug/m3	5.4		TO-15	Total/NA
Toluene	15		8.1	ug/m3	5.4		TO-15	Total/NA
Trichloroethene	28		12	ug/m3	5.4		TO-15	Total/NA
m,p-Xylene	21		19	ug/m3	5.4		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-08

Lab Sample ID: 320-31467-27

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	3.2		2.8	ppb v/v	3.44		TO-15	Total/NA
Carbon disulfide	4.4		2.8	ppb v/v	3.44		TO-15	Total/NA
Chloroform	1.2		1.0	ppb v/v	3.44		TO-15	Total/NA
Dichlorodifluoromethane	8.1		1.4	ppb v/v	3.44		TO-15	Total/NA
Tetrachloroethene	290		1.4	ppb v/v	3.44		TO-15	Total/NA
Toluene	8.2		1.4	ppb v/v	3.44		TO-15	Total/NA
Trichloroethene	4.9		1.4	ppb v/v	3.44		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	9.4		8.1	ug/m3	3.44		TO-15	Total/NA
Carbon disulfide	14		8.6	ug/m3	3.44		TO-15	Total/NA
Chloroform	5.6		5.0	ug/m3	3.44		TO-15	Total/NA
Dichlorodifluoromethane	40		6.8	ug/m3	3.44		TO-15	Total/NA
Tetrachloroethene	2000		9.3	ug/m3	3.44		TO-15	Total/NA
Toluene	31		5.2	ug/m3	3.44		TO-15	Total/NA
Trichloroethene	26		7.4	ug/m3	3.44		TO-15	Total/NA

Client Sample ID: G-170907-RA-09

Lab Sample ID: 320-31467-28

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	14		6.5	ppb v/v	1.3		TO-15	Total/NA
2-Butanone (MEK)	3.0		1.0	ppb v/v	1.3		TO-15	Total/NA
Carbon disulfide	3.8		1.0	ppb v/v	1.3		TO-15	Total/NA
Dichlorodifluoromethane	0.58		0.52	ppb v/v	1.3		TO-15	Total/NA
Methylene Chloride	0.76		0.52	ppb v/v	1.3		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	1.1		0.52	ppb v/v	1.3		TO-15	Total/NA
Tetrachloroethene	36		0.52	ppb v/v	1.3		TO-15	Total/NA
Toluene	2.9		0.52	ppb v/v	1.3		TO-15	Total/NA
Trichloroethene	0.64		0.52	ppb v/v	1.3		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	33		15	ug/m3	1.3		TO-15	Total/NA
2-Butanone (MEK)	8.8		3.1	ug/m3	1.3		TO-15	Total/NA
Carbon disulfide	12		3.2	ug/m3	1.3		TO-15	Total/NA
Dichlorodifluoromethane	2.9		2.6	ug/m3	1.3		TO-15	Total/NA
Methylene Chloride	2.6		1.8	ug/m3	1.3		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	4.5		2.1	ug/m3	1.3		TO-15	Total/NA
Tetrachloroethene	240		3.5	ug/m3	1.3		TO-15	Total/NA
Toluene	11		2.0	ug/m3	1.3		TO-15	Total/NA
Trichloroethene	3.4		2.8	ug/m3	1.3		TO-15	Total/NA

Client Sample ID: G-170907-RA-10

Lab Sample ID: 320-31467-29

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	16		5.0	ppb v/v	1		TO-15	Total/NA
Benzene	0.73		0.40	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	1.5		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	18		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	7.7		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	1.8		0.40	ppb v/v	1		TO-15	Total/NA
4-Ethyltoluene	0.52		0.40	ppb v/v	1		TO-15	Total/NA
2-Hexanone	0.42		0.40	ppb v/v	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-10 (Continued)

Lab Sample ID: 320-31467-29

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
4-Methyl-2-pentanone (MIBK)	0.78		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	42		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	6.8		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	2.4		0.40	ppb v/v	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	1.1		0.80	ppb v/v	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.42		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	6.5		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	2.3		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	39		12	ug/m3	1		TO-15	Total/NA
Benzene	2.3		1.3	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	4.4		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	55		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	38		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	7.9		1.7	ug/m3	1		TO-15	Total/NA
4-Ethyltoluene	2.6		2.0	ug/m3	1		TO-15	Total/NA
2-Hexanone	1.7		1.6	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	3.2		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	290		2.7	ug/m3	1		TO-15	Total/NA
Toluene	26		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	13		2.1	ug/m3	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	5.5		3.9	ug/m3	1		TO-15	Total/NA
1,3,5-Trimethylbenzene	2.1		2.0	ug/m3	1		TO-15	Total/NA
m,p-Xylene	28		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	10		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-21

Lab Sample ID: 320-31467-30

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	12		6.5	ppb v/v	1.3		TO-15	Total/NA
2-Butanone (MEK)	3.0		1.0	ppb v/v	1.3		TO-15	Total/NA
Carbon disulfide	11		1.0	ppb v/v	1.3		TO-15	Total/NA
Carbon tetrachloride	3.6		1.0	ppb v/v	1.3		TO-15	Total/NA
Chloroform	24		0.39	ppb v/v	1.3		TO-15	Total/NA
Dichlorodifluoromethane	82		0.52	ppb v/v	1.3		TO-15	Total/NA
Ethylbenzene	2.2		0.52	ppb v/v	1.3		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	1.8		0.52	ppb v/v	1.3		TO-15	Total/NA
Tetrachloroethene	32		0.52	ppb v/v	1.3		TO-15	Total/NA
Toluene	4.8		0.52	ppb v/v	1.3		TO-15	Total/NA
Trichloroethene	0.98		0.52	ppb v/v	1.3		TO-15	Total/NA
1,2,4-Trimethylbenzene	1.5		1.0	ppb v/v	1.3		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.54		0.52	ppb v/v	1.3		TO-15	Total/NA
m,p-Xylene	9.2		1.0	ppb v/v	1.3		TO-15	Total/NA
o-Xylene	4.0		0.52	ppb v/v	1.3		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	28		15	ug/m3	1.3		TO-15	Total/NA
2-Butanone (MEK)	8.9		3.1	ug/m3	1.3		TO-15	Total/NA
Carbon disulfide	34		3.2	ug/m3	1.3		TO-15	Total/NA
Carbon tetrachloride	23		6.5	ug/m3	1.3		TO-15	Total/NA
Chloroform	110		1.9	ug/m3	1.3		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-21 (Continued)

Lab Sample ID: 320-31467-30

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	400		2.6	ug/m3	1.3		TO-15	Total/NA
Ethylbenzene	9.7		2.3	ug/m3	1.3		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	7.3		2.1	ug/m3	1.3		TO-15	Total/NA
Tetrachloroethene	220		3.5	ug/m3	1.3		TO-15	Total/NA
Toluene	18		2.0	ug/m3	1.3		TO-15	Total/NA
Trichloroethene	5.3		2.8	ug/m3	1.3		TO-15	Total/NA
1,2,4-Trimethylbenzene	7.3		5.1	ug/m3	1.3		TO-15	Total/NA
1,3,5-Trimethylbenzene	2.7		2.6	ug/m3	1.3		TO-15	Total/NA
m,p-Xylene	40		4.5	ug/m3	1.3		TO-15	Total/NA
o-Xylene	18		2.3	ug/m3	1.3		TO-15	Total/NA

Client Sample ID: G-170907-RA-22

Lab Sample ID: 320-31467-31

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	18		5.0	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	1.6		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	11		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	0.53		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	0.87		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	43		12	ug/m3	1		TO-15	Total/NA
Carbon disulfide	5.0		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	54		2.0	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	3.6		2.7	ug/m3	1		TO-15	Total/NA
Toluene	3.3		1.5	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-23

Lab Sample ID: 320-31467-32

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	9.7		5.0	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	1.1		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	4.3		0.80	ppb v/v	1		TO-15	Total/NA
Chloroform	0.56		0.30	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	41		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	0.54		0.40	ppb v/v	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	0.43		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	26		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	0.50		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	3.7		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	23		12	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	3.1		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	13		2.5	ug/m3	1		TO-15	Total/NA
Chloroform	2.8		1.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	200		2.0	ug/m3	1		TO-15	Total/NA
Methylene Chloride	1.9		1.4	ug/m3	1		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	1.8		1.6	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	170		2.7	ug/m3	1		TO-15	Total/NA
Toluene	1.9		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	20		2.1	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-24

Lab Sample ID: 320-31467-33

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	11		5.0	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	1.0		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	27		0.80	ppb v/v	1		TO-15	Total/NA
Chloroform	0.59		0.30	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	15		0.40	ppb v/v	1		TO-15	Total/NA
cis-1,2-Dichloroethene	0.44		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.79		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	0.62		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	44		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	2.9		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	1.4		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	1.4		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	0.52		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	25		12	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	3.1		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	85		2.5	ug/m3	1		TO-15	Total/NA
Chloroform	2.9		1.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	73		2.0	ug/m3	1		TO-15	Total/NA
cis-1,2-Dichloroethene	1.7		1.6	ug/m3	1		TO-15	Total/NA
Ethylbenzene	3.4		1.7	ug/m3	1		TO-15	Total/NA
Methylene Chloride	2.1		1.4	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	300		2.7	ug/m3	1		TO-15	Total/NA
Toluene	11		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	7.4		2.1	ug/m3	1		TO-15	Total/NA
m,p-Xylene	6.2		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	2.3		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-25

Lab Sample ID: 320-31467-34

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	7.3		5.0	ppb v/v	1		TO-15	Total/NA
2-Butanone (MEK)	12		0.80	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	4.1		0.80	ppb v/v	1		TO-15	Total/NA
Chloroform	0.45		0.30	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.50		0.40	ppb v/v	1		TO-15	Total/NA
2-Hexanone	0.71		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	9.3		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	1.6		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	1.3		0.40	ppb v/v	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	0.85		0.80	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	2.1		0.80	ppb v/v	1		TO-15	Total/NA
o-Xylene	0.84		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	17		12	ug/m3	1		TO-15	Total/NA
2-Butanone (MEK)	37		2.4	ug/m3	1		TO-15	Total/NA
Carbon disulfide	13		2.5	ug/m3	1		TO-15	Total/NA
Chloroform	2.2		1.5	ug/m3	1		TO-15	Total/NA
Ethylbenzene	2.2		1.7	ug/m3	1		TO-15	Total/NA
2-Hexanone	2.9		1.6	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-25 (Continued)

Lab Sample ID: 320-31467-34

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	63		2.7	ug/m3	1		TO-15	Total/NA
Toluene	6.0		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	6.8		2.1	ug/m3	1		TO-15	Total/NA
1,2,4-Trimethylbenzene	4.2		3.9	ug/m3	1		TO-15	Total/NA
m,p-Xylene	9.3		3.5	ug/m3	1		TO-15	Total/NA
o-Xylene	3.7		1.7	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-26

Lab Sample ID: 320-31467-35

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	7.5		5.0	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	18		0.80	ppb v/v	1		TO-15	Total/NA
Chloroform	0.51		0.30	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	1.1		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	1.2		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	18		12	ug/m3	1		TO-15	Total/NA
Carbon disulfide	55		2.5	ug/m3	1		TO-15	Total/NA
Chloroform	2.5		1.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	5.5		2.0	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	6.8		2.2	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-27

Lab Sample ID: 320-31467-36

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	9.9		8.1	ppb v/v	1.61		TO-15	Total/NA
2-Butanone (MEK)	24		1.3	ppb v/v	1.61		TO-15	Total/NA
Carbon disulfide	5.0		1.3	ppb v/v	1.61		TO-15	Total/NA
Chloroform	0.96		0.48	ppb v/v	1.61		TO-15	Total/NA
Dichlorodifluoromethane	3.8		0.64	ppb v/v	1.61		TO-15	Total/NA
Ethylbenzene	0.74		0.64	ppb v/v	1.61		TO-15	Total/NA
2-Hexanone	1.2		0.64	ppb v/v	1.61		TO-15	Total/NA
Methylene Chloride	0.74		0.64	ppb v/v	1.61		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	0.82		0.64	ppb v/v	1.61		TO-15	Total/NA
Tetrachloroethene	59		0.64	ppb v/v	1.61		TO-15	Total/NA
Toluene	2.9		0.64	ppb v/v	1.61		TO-15	Total/NA
1,1,1-Trichloroethane	1.1		0.48	ppb v/v	1.61		TO-15	Total/NA
Trichloroethene	1.6		0.64	ppb v/v	1.61		TO-15	Total/NA
Trichlorofluoromethane	1.1		0.64	ppb v/v	1.61		TO-15	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	0.98		0.64	ppb v/v	1.61		TO-15	Total/NA
m,p-Xylene	2.9		1.3	ppb v/v	1.61		TO-15	Total/NA
o-Xylene	1.1		0.64	ppb v/v	1.61		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	23		19	ug/m3	1.61		TO-15	Total/NA
2-Butanone (MEK)	70		3.8	ug/m3	1.61		TO-15	Total/NA
Carbon disulfide	16		4.0	ug/m3	1.61		TO-15	Total/NA
Chloroform	4.7		2.4	ug/m3	1.61		TO-15	Total/NA
Dichlorodifluoromethane	19		3.2	ug/m3	1.61		TO-15	Total/NA
Ethylbenzene	3.2		2.8	ug/m3	1.61		TO-15	Total/NA
2-Hexanone	4.8		2.6	ug/m3	1.61		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-27 (Continued)

Lab Sample ID: 320-31467-36

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	2.6		2.2	ug/m3	1.61		TO-15	Total/NA
4-Methyl-2-pentanone (MIBK)	3.3		2.6	ug/m3	1.61		TO-15	Total/NA
Tetrachloroethene	400		4.4	ug/m3	1.61		TO-15	Total/NA
Toluene	11		2.4	ug/m3	1.61		TO-15	Total/NA
1,1,1-Trichloroethane	6.2		2.6	ug/m3	1.61		TO-15	Total/NA
Trichloroethene	8.7		3.5	ug/m3	1.61		TO-15	Total/NA
Trichlorofluoromethane	6.1		3.6	ug/m3	1.61		TO-15	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	7.5		4.9	ug/m3	1.61		TO-15	Total/NA
m,p-Xylene	12		5.6	ug/m3	1.61		TO-15	Total/NA
o-Xylene	4.6		2.8	ug/m3	1.61		TO-15	Total/NA

Client Sample ID: G-170907-RA-28

Lab Sample ID: 320-31467-37

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	16		3.4	ppb v/v	4.28		TO-15	Total/NA
Carbon disulfide	5.4		3.4	ppb v/v	4.28		TO-15	Total/NA
Dichlorodifluoromethane	14		1.7	ppb v/v	4.28		TO-15	Total/NA
Tetrachloroethene	220		1.7	ppb v/v	4.28		TO-15	Total/NA
Toluene	5.4		1.7	ppb v/v	4.28		TO-15	Total/NA
1,1,1-Trichloroethane	2.3		1.3	ppb v/v	4.28		TO-15	Total/NA
Trichloroethene	2.1		1.7	ppb v/v	4.28		TO-15	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	2.3		1.7	ppb v/v	4.28		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	47		10	ug/m3	4.28		TO-15	Total/NA
Carbon disulfide	17		11	ug/m3	4.28		TO-15	Total/NA
Dichlorodifluoromethane	70		8.5	ug/m3	4.28		TO-15	Total/NA
Tetrachloroethene	1500		12	ug/m3	4.28		TO-15	Total/NA
Toluene	20		6.5	ug/m3	4.28		TO-15	Total/NA
1,1,1-Trichloroethane	13		7.0	ug/m3	4.28		TO-15	Total/NA
Trichloroethene	11		9.2	ug/m3	4.28		TO-15	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	17		13	ug/m3	4.28		TO-15	Total/NA

Client Sample ID: G-170907-RA-29

Lab Sample ID: 320-31467-38

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	3.1		1.8	ppb v/v	2.26		TO-15	Total/NA
Carbon disulfide	3.5		1.8	ppb v/v	2.26		TO-15	Total/NA
cis-1,2-Dichloroethene	3.3		0.90	ppb v/v	2.26		TO-15	Total/NA
Tetrachloroethene	120		0.90	ppb v/v	2.26		TO-15	Total/NA
Toluene	1.6		0.90	ppb v/v	2.26		TO-15	Total/NA
Trichloroethene	3.6		0.90	ppb v/v	2.26		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	9.1		5.3	ug/m3	2.26		TO-15	Total/NA
Carbon disulfide	11		5.6	ug/m3	2.26		TO-15	Total/NA
cis-1,2-Dichloroethene	13		3.6	ug/m3	2.26		TO-15	Total/NA
Tetrachloroethene	830		6.1	ug/m3	2.26		TO-15	Total/NA
Toluene	5.9		3.4	ug/m3	2.26		TO-15	Total/NA
Trichloroethene	19		4.9	ug/m3	2.26		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-30

Lab Sample ID: 320-31467-39

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	5.5		1.7	ppb v/v	2.18		TO-15	Total/NA
Carbon disulfide	4.4		1.7	ppb v/v	2.18		TO-15	Total/NA
cis-1,2-Dichloroethene	3.1		0.87	ppb v/v	2.18		TO-15	Total/NA
Tetrachloroethene	110		0.87	ppb v/v	2.18		TO-15	Total/NA
Toluene	0.89		0.87	ppb v/v	2.18		TO-15	Total/NA
Trichloroethene	3.2		0.87	ppb v/v	2.18		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	16		5.1	ug/m3	2.18		TO-15	Total/NA
Carbon disulfide	14		5.4	ug/m3	2.18		TO-15	Total/NA
cis-1,2-Dichloroethene	12		3.5	ug/m3	2.18		TO-15	Total/NA
Tetrachloroethene	770		5.9	ug/m3	2.18		TO-15	Total/NA
Toluene	3.3		3.3	ug/m3	2.18		TO-15	Total/NA
Trichloroethene	17		4.7	ug/m3	2.18		TO-15	Total/NA

Client Sample ID: G-170907-RA-31

Lab Sample ID: 320-31467-40

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.6		5.0	ppb v/v	1		TO-15	Total/NA
Carbon disulfide	3.7		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	0.51		0.40	ppb v/v	1		TO-15	Total/NA
Methylene Chloride	0.42		0.40	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	13		12	ug/m3	1		TO-15	Total/NA
Carbon disulfide	12		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	2.5		2.0	ug/m3	1		TO-15	Total/NA
Methylene Chloride	1.4		1.4	ug/m3	1		TO-15	Total/NA

Client Sample ID: G-170907-RA-32

Lab Sample ID: 320-31467-41

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	91		18	ppb v/v	3.65		TO-15	Total/NA
2-Butanone (MEK)	6.7		2.9	ppb v/v	3.65		TO-15	Total/NA
Tetrachloroethene	4.5		1.5	ppb v/v	3.65		TO-15	Total/NA
Toluene	9.2		1.5	ppb v/v	3.65		TO-15	Total/NA
m,p-Xylene	4.7		2.9	ppb v/v	3.65		TO-15	Total/NA
o-Xylene	1.6		1.5	ppb v/v	3.65		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	220		43	ug/m3	3.65		TO-15	Total/NA
2-Butanone (MEK)	20		8.6	ug/m3	3.65		TO-15	Total/NA
Tetrachloroethene	31		9.9	ug/m3	3.65		TO-15	Total/NA
Toluene	35		5.5	ug/m3	3.65		TO-15	Total/NA
m,p-Xylene	20		13	ug/m3	3.65		TO-15	Total/NA
o-Xylene	7.0		6.3	ug/m3	3.65		TO-15	Total/NA

Client Sample ID: G-170907-RA-33

Lab Sample ID: 320-31467-42

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	1.5		0.80	ppb v/v	1		TO-15	Total/NA
Dichlorodifluoromethane	29		0.40	ppb v/v	1		TO-15	Total/NA
Ethylbenzene	0.42		0.40	ppb v/v	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-33 (Continued)

Lab Sample ID: 320-31467-42

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	1.2		0.40	ppb v/v	1		TO-15	Total/NA
Tetrachloroethene	29		0.40	ppb v/v	1		TO-15	Total/NA
Toluene	3.2		0.40	ppb v/v	1		TO-15	Total/NA
Trichloroethene	0.68		0.40	ppb v/v	1		TO-15	Total/NA
Trichlorofluoromethane	0.60		0.40	ppb v/v	1		TO-15	Total/NA
m,p-Xylene	0.90		0.80	ppb v/v	1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	4.8		2.5	ug/m3	1		TO-15	Total/NA
Dichlorodifluoromethane	140		2.0	ug/m3	1		TO-15	Total/NA
Ethylbenzene	1.8		1.7	ug/m3	1		TO-15	Total/NA
Methylene Chloride	4.0		1.4	ug/m3	1		TO-15	Total/NA
Tetrachloroethene	200		2.7	ug/m3	1		TO-15	Total/NA
Toluene	12		1.5	ug/m3	1		TO-15	Total/NA
Trichloroethene	3.7		2.1	ug/m3	1		TO-15	Total/NA
Trichlorofluoromethane	3.4		2.2	ug/m3	1		TO-15	Total/NA
m,p-Xylene	3.9		3.5	ug/m3	1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-01

Lab Sample ID: 320-31467-1

Date Collected: 09/06/17 10:59

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	43		5.0	ppb v/v			09/22/17 18:17	1
Benzene	1.5		0.40	ppb v/v			09/22/17 18:17	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 18:17	1
Bromodichloromethane	0.42		0.30	ppb v/v			09/22/17 18:17	1
Bromoform	ND		0.40	ppb v/v			09/22/17 18:17	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 18:17	1
2-Butanone (MEK)	2.8		0.80	ppb v/v			09/22/17 18:17	1
Carbon disulfide	12		0.80	ppb v/v			09/22/17 18:17	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 18:17	1
Chlorobenzene	0.40		0.30	ppb v/v			09/22/17 18:17	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 18:17	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 18:17	1
Chloroform	0.53		0.30	ppb v/v			09/22/17 18:17	1
Chloromethane	1.1		0.80	ppb v/v			09/22/17 18:17	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 18:17	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 18:17	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 18:17	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 18:17	1
Dichlorodifluoromethane	0.66		0.40	ppb v/v			09/22/17 18:17	1
1,1-Dichloroethane	1.2		0.30	ppb v/v			09/22/17 18:17	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 18:17	1
1,1-Dichloroethene	3.9		0.80	ppb v/v			09/22/17 18:17	1
cis-1,2-Dichloroethene	10		0.40	ppb v/v			09/22/17 18:17	1
trans-1,2-Dichloroethene	0.55		0.40	ppb v/v			09/22/17 18:17	1
1,2-Dichloropropane	0.44		0.40	ppb v/v			09/22/17 18:17	1
cis-1,3-Dichloropropene	0.44		0.40	ppb v/v			09/22/17 18:17	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 18:17	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.45		0.40	ppb v/v			09/22/17 18:17	1
Ethylbenzene	1.3		0.40	ppb v/v			09/22/17 18:17	1
4-Ethyltoluene	0.48		0.40	ppb v/v			09/22/17 18:17	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 18:17	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 18:17	1
Methylene Chloride	4.9		0.40	ppb v/v			09/22/17 18:17	1
4-Methyl-2-pentanone (MIBK)	1.1		0.40	ppb v/v			09/22/17 18:17	1
Styrene	ND		0.40	ppb v/v			09/22/17 18:17	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 18:17	1
Tetrachloroethene	2.6		0.40	ppb v/v			09/22/17 18:17	1
Toluene	12		0.40	ppb v/v			09/22/17 18:17	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 18:17	1
1,1,1-Trichloroethane	1.8		0.30	ppb v/v			09/22/17 18:17	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 18:17	1
Trichloroethene	2.8		0.40	ppb v/v			09/22/17 18:17	1
Trichlorofluoromethane	1.5		0.40	ppb v/v			09/22/17 18:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.59		0.40	ppb v/v			09/22/17 18:17	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 18:17	1
1,3,5-Trimethylbenzene	0.43		0.40	ppb v/v			09/22/17 18:17	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 18:17	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-01

Lab Sample ID: 320-31467-1

Date Collected: 09/06/17 10:59

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.6		0.40	ppb v/v			09/22/17 18:17	1
m,p-Xylene	3.6		0.80	ppb v/v			09/22/17 18:17	1
o-Xylene	1.3		0.40	ppb v/v			09/22/17 18:17	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 18:17	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	100		12	ug/m3			09/22/17 18:17	1
Benzene	4.9		1.3	ug/m3			09/22/17 18:17	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 18:17	1
Bromodichloromethane	2.8		2.0	ug/m3			09/22/17 18:17	1
Bromoform	ND		4.1	ug/m3			09/22/17 18:17	1
Bromomethane	ND		3.1	ug/m3			09/22/17 18:17	1
2-Butanone (MEK)	8.2		2.4	ug/m3			09/22/17 18:17	1
Carbon disulfide	39		2.5	ug/m3			09/22/17 18:17	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 18:17	1
Chlorobenzene	1.8		1.4	ug/m3			09/22/17 18:17	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 18:17	1
Chloroethane	ND		2.1	ug/m3			09/22/17 18:17	1
Chloroform	2.6		1.5	ug/m3			09/22/17 18:17	1
Chloromethane	2.3		1.7	ug/m3			09/22/17 18:17	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 18:17	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 18:17	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 18:17	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 18:17	1
Dichlorodifluoromethane	3.2		2.0	ug/m3			09/22/17 18:17	1
1,1-Dichloroethane	4.7		1.2	ug/m3			09/22/17 18:17	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 18:17	1
1,1-Dichloroethene	16		3.2	ug/m3			09/22/17 18:17	1
cis-1,2-Dichloroethene	41		1.6	ug/m3			09/22/17 18:17	1
trans-1,2-Dichloroethene	2.2		1.6	ug/m3			09/22/17 18:17	1
1,2-Dichloropropane	2.0		1.8	ug/m3			09/22/17 18:17	1
cis-1,3-Dichloropropene	2.0		1.8	ug/m3			09/22/17 18:17	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 18:17	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	3.1		2.8	ug/m3			09/22/17 18:17	1
Ethylbenzene	5.4		1.7	ug/m3			09/22/17 18:17	1
4-Ethyltoluene	2.4		2.0	ug/m3			09/22/17 18:17	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 18:17	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 18:17	1
Methylene Chloride	17		1.4	ug/m3			09/22/17 18:17	1
4-Methyl-2-pentanone (MIBK)	4.4		1.6	ug/m3			09/22/17 18:17	1
Styrene	ND		1.7	ug/m3			09/22/17 18:17	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 18:17	1
Tetrachloroethene	18		2.7	ug/m3			09/22/17 18:17	1
Toluene	44		1.5	ug/m3			09/22/17 18:17	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 18:17	1
1,1,1-Trichloroethane	10		1.6	ug/m3			09/22/17 18:17	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 18:17	1
Trichloroethene	15		2.1	ug/m3			09/22/17 18:17	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-01

Lab Sample ID: 320-31467-1

Date Collected: 09/06/17 10:59

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	8.2		2.2	ug/m3			09/22/17 18:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	4.6		3.1	ug/m3			09/22/17 18:17	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 18:17	1
1,3,5-Trimethylbenzene	2.1		2.0	ug/m3			09/22/17 18:17	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 18:17	1
Vinyl chloride	4.2		1.0	ug/m3			09/22/17 18:17	1
m,p-Xylene	15		3.5	ug/m3			09/22/17 18:17	1
o-Xylene	5.5		1.7	ug/m3			09/22/17 18:17	1
Naphthalene	ND		4.2	ug/m3			09/22/17 18:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130				09/22/17 18:17	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130				09/22/17 18:17	1
Toluene-d8 (Surr)	118		70 - 130				09/22/17 18:17	1

Client Sample ID: SS-170906-RA-02

Lab Sample ID: 320-31467-2

Date Collected: 09/06/17 11:05

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	35		5.0	ppb v/v			09/21/17 21:08	1
Benzene	0.84		0.40	ppb v/v			09/21/17 21:08	1
Benzyl chloride	ND		0.80	ppb v/v			09/21/17 21:08	1
Bromodichloromethane	ND		0.30	ppb v/v			09/21/17 21:08	1
Bromoform	ND		0.40	ppb v/v			09/21/17 21:08	1
Bromomethane	ND		0.80	ppb v/v			09/21/17 21:08	1
2-Butanone (MEK)	2.9		0.80	ppb v/v			09/21/17 21:08	1
Carbon disulfide	2.6		0.80	ppb v/v			09/21/17 21:08	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/21/17 21:08	1
Chlorobenzene	ND		0.30	ppb v/v			09/21/17 21:08	1
Dibromochloromethane	ND		0.40	ppb v/v			09/21/17 21:08	1
Chloroethane	ND		0.80	ppb v/v			09/21/17 21:08	1
Chloroform	ND		0.30	ppb v/v			09/21/17 21:08	1
Chloromethane	ND		0.80	ppb v/v			09/21/17 21:08	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/21/17 21:08	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 21:08	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 21:08	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 21:08	1
Dichlorodifluoromethane	0.41		0.40	ppb v/v			09/21/17 21:08	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/21/17 21:08	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/21/17 21:08	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/21/17 21:08	1
cis-1,2-Dichloroethene	0.74		0.40	ppb v/v			09/21/17 21:08	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/21/17 21:08	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/21/17 21:08	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/21/17 21:08	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-02

Lab Sample ID: 320-31467-2

Date Collected: 09/06/17 11:05

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/21/17 21:08	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/21/17 21:08	1
Ethylbenzene	1.2		0.40	ppb v/v			09/21/17 21:08	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/21/17 21:08	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/21/17 21:08	1
2-Hexanone	ND		0.40	ppb v/v			09/21/17 21:08	1
Methylene Chloride	1.0		0.40	ppb v/v			09/21/17 21:08	1
4-Methyl-2-pentanone (MIBK)	2.6		0.40	ppb v/v			09/21/17 21:08	1
Styrene	ND		0.40	ppb v/v			09/21/17 21:08	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/21/17 21:08	1
Tetrachloroethene	2.0		0.40	ppb v/v			09/21/17 21:08	1
Toluene	6.2		0.40	ppb v/v			09/21/17 21:08	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/21/17 21:08	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/21/17 21:08	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/21/17 21:08	1
Trichloroethene	0.63		0.40	ppb v/v			09/21/17 21:08	1
Trichlorofluoromethane	0.59		0.40	ppb v/v			09/21/17 21:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/21/17 21:08	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/21/17 21:08	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/21/17 21:08	1
Vinyl acetate	ND		0.80	ppb v/v			09/21/17 21:08	1
Vinyl chloride	ND		0.40	ppb v/v			09/21/17 21:08	1
m,p-Xylene	3.8		0.80	ppb v/v			09/21/17 21:08	1
o-Xylene	1.3		0.40	ppb v/v			09/21/17 21:08	1
Naphthalene	ND		0.80	ppb v/v			09/21/17 21:08	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	84		12	ug/m3			09/21/17 21:08	1
Benzene	2.7		1.3	ug/m3			09/21/17 21:08	1
Benzyl chloride	ND		4.1	ug/m3			09/21/17 21:08	1
Bromodichloromethane	ND		2.0	ug/m3			09/21/17 21:08	1
Bromoform	ND		4.1	ug/m3			09/21/17 21:08	1
Bromomethane	ND		3.1	ug/m3			09/21/17 21:08	1
2-Butanone (MEK)	8.5		2.4	ug/m3			09/21/17 21:08	1
Carbon disulfide	8.0		2.5	ug/m3			09/21/17 21:08	1
Carbon tetrachloride	ND		5.0	ug/m3			09/21/17 21:08	1
Chlorobenzene	ND		1.4	ug/m3			09/21/17 21:08	1
Dibromochloromethane	ND		3.4	ug/m3			09/21/17 21:08	1
Chloroethane	ND		2.1	ug/m3			09/21/17 21:08	1
Chloroform	ND		1.5	ug/m3			09/21/17 21:08	1
Chloromethane	ND		1.7	ug/m3			09/21/17 21:08	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/21/17 21:08	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 21:08	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 21:08	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 21:08	1
Dichlorodifluoromethane	2.0		2.0	ug/m3			09/21/17 21:08	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/21/17 21:08	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/21/17 21:08	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/21/17 21:08	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-02

Lab Sample ID: 320-31467-2

Date Collected: 09/06/17 11:05

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	2.9		1.6	ug/m3			09/21/17 21:08	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/21/17 21:08	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/21/17 21:08	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/21/17 21:08	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/21/17 21:08	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/21/17 21:08	1
Ethylbenzene	5.4		1.7	ug/m3			09/21/17 21:08	1
4-Ethyltoluene	ND		2.0	ug/m3			09/21/17 21:08	1
Hexachlorobutadiene	ND		21	ug/m3			09/21/17 21:08	1
2-Hexanone	ND		1.6	ug/m3			09/21/17 21:08	1
Methylene Chloride	3.5		1.4	ug/m3			09/21/17 21:08	1
4-Methyl-2-pentanone (MIBK)	10		1.6	ug/m3			09/21/17 21:08	1
Styrene	ND		1.7	ug/m3			09/21/17 21:08	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/21/17 21:08	1
Tetrachloroethene	14		2.7	ug/m3			09/21/17 21:08	1
Toluene	23		1.5	ug/m3			09/21/17 21:08	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/21/17 21:08	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/21/17 21:08	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/21/17 21:08	1
Trichloroethene	3.4		2.1	ug/m3			09/21/17 21:08	1
Trichlorofluoromethane	3.3		2.2	ug/m3			09/21/17 21:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/21/17 21:08	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/21/17 21:08	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/21/17 21:08	1
Vinyl acetate	ND		2.8	ug/m3			09/21/17 21:08	1
Vinyl chloride	ND		1.0	ug/m3			09/21/17 21:08	1
m,p-Xylene	16		3.5	ug/m3			09/21/17 21:08	1
o-Xylene	5.5		1.7	ug/m3			09/21/17 21:08	1
Naphthalene	ND		4.2	ug/m3			09/21/17 21:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130				09/21/17 21:08	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 130				09/21/17 21:08	1
Toluene-d8 (Surr)	115		70 - 130				09/21/17 21:08	1

Client Sample ID: SS-170906-RA-03

Lab Sample ID: 320-31467-3

Date Collected: 09/06/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	49		12	ppb v/v			09/21/17 22:01	2.38
Benzene	1.0		0.95	ppb v/v			09/21/17 22:01	2.38
Benzyl chloride	ND		1.9	ppb v/v			09/21/17 22:01	2.38
Bromodichloromethane	ND		0.71	ppb v/v			09/21/17 22:01	2.38
Bromoform	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Bromomethane	ND		1.9	ppb v/v			09/21/17 22:01	2.38
2-Butanone (MEK)	1.9		1.9	ppb v/v			09/21/17 22:01	2.38

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-03

Lab Sample ID: 320-31467-3

Date Collected: 09/06/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	2.2		1.9	ppb v/v			09/21/17 22:01	2.38
Carbon tetrachloride	ND		1.9	ppb v/v			09/21/17 22:01	2.38
Chlorobenzene	ND		0.71	ppb v/v			09/21/17 22:01	2.38
Dibromochloromethane	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Chloroethane	ND		1.9	ppb v/v			09/21/17 22:01	2.38
Chloroform	ND		0.71	ppb v/v			09/21/17 22:01	2.38
Chloromethane	ND		1.9	ppb v/v			09/21/17 22:01	2.38
1,2-Dibromoethane (EDB)	ND		1.9	ppb v/v			09/21/17 22:01	2.38
1,2-Dichlorobenzene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
1,3-Dichlorobenzene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
1,4-Dichlorobenzene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Dichlorodifluoromethane	ND		0.95	ppb v/v			09/21/17 22:01	2.38
1,1-Dichloroethane	ND		0.71	ppb v/v			09/21/17 22:01	2.38
1,2-Dichloroethane	ND		1.9	ppb v/v			09/21/17 22:01	2.38
1,1-Dichloroethene	ND		1.9	ppb v/v			09/21/17 22:01	2.38
cis-1,2-Dichloroethene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
trans-1,2-Dichloroethene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
1,2-Dichloropropane	ND		0.95	ppb v/v			09/21/17 22:01	2.38
cis-1,3-Dichloropropene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
trans-1,3-Dichloropropene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Ethylbenzene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
4-Ethyltoluene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Hexachlorobutadiene	ND		4.8	ppb v/v			09/21/17 22:01	2.38
2-Hexanone	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Methylene Chloride	2.2		0.95	ppb v/v			09/21/17 22:01	2.38
4-Methyl-2-pentanone (MIBK)	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Styrene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
1,1,2,2-Tetrachloroethane	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Tetrachloroethene	1.7		0.95	ppb v/v			09/21/17 22:01	2.38
Toluene	7.6		0.95	ppb v/v			09/21/17 22:01	2.38
1,2,4-Trichlorobenzene	ND		4.8	ppb v/v			09/21/17 22:01	2.38
1,1,1-Trichloroethane	ND		0.71	ppb v/v			09/21/17 22:01	2.38
1,1,2-Trichloroethane	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Trichloroethene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Trichlorofluoromethane	0.99		0.95	ppb v/v			09/21/17 22:01	2.38
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.95	ppb v/v			09/21/17 22:01	2.38
1,2,4-Trimethylbenzene	ND		1.9	ppb v/v			09/21/17 22:01	2.38
1,3,5-Trimethylbenzene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Vinyl acetate	ND		1.9	ppb v/v			09/21/17 22:01	2.38
Vinyl chloride	ND		0.95	ppb v/v			09/21/17 22:01	2.38
m,p-Xylene	2.7		1.9	ppb v/v			09/21/17 22:01	2.38
o-Xylene	ND		0.95	ppb v/v			09/21/17 22:01	2.38
Naphthalene	ND		1.9	ppb v/v			09/21/17 22:01	2.38
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	120		28	ug/m3			09/21/17 22:01	2.38
Benzene	3.3		3.0	ug/m3			09/21/17 22:01	2.38
Benzyl chloride	ND		9.9	ug/m3			09/21/17 22:01	2.38

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-03

Lab Sample ID: 320-31467-3

Date Collected: 09/06/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		4.8	ug/m3			09/21/17 22:01	2.38
Bromoform	ND		9.8	ug/m3			09/21/17 22:01	2.38
Bromomethane	ND		7.4	ug/m3			09/21/17 22:01	2.38
2-Butanone (MEK)	5.5		5.6	ug/m3			09/21/17 22:01	2.38
Carbon disulfide	6.9		5.9	ug/m3			09/21/17 22:01	2.38
Carbon tetrachloride	ND		12	ug/m3			09/21/17 22:01	2.38
Chlorobenzene	ND		3.3	ug/m3			09/21/17 22:01	2.38
Dibromochloromethane	ND		8.1	ug/m3			09/21/17 22:01	2.38
Chloroethane	ND		5.0	ug/m3			09/21/17 22:01	2.38
Chloroform	ND		3.5	ug/m3			09/21/17 22:01	2.38
Chloromethane	ND		3.9	ug/m3			09/21/17 22:01	2.38
1,2-Dibromoethane (EDB)	ND		15	ug/m3			09/21/17 22:01	2.38
1,2-Dichlorobenzene	ND		5.7	ug/m3			09/21/17 22:01	2.38
1,3-Dichlorobenzene	ND		5.7	ug/m3			09/21/17 22:01	2.38
1,4-Dichlorobenzene	ND		5.7	ug/m3			09/21/17 22:01	2.38
Dichlorodifluoromethane	ND		4.7	ug/m3			09/21/17 22:01	2.38
1,1-Dichloroethane	ND		2.9	ug/m3			09/21/17 22:01	2.38
1,2-Dichloroethane	ND		7.7	ug/m3			09/21/17 22:01	2.38
1,1-Dichloroethene	ND		7.5	ug/m3			09/21/17 22:01	2.38
cis-1,2-Dichloroethene	ND		3.8	ug/m3			09/21/17 22:01	2.38
trans-1,2-Dichloroethene	ND		3.8	ug/m3			09/21/17 22:01	2.38
1,2-Dichloropropane	ND		4.4	ug/m3			09/21/17 22:01	2.38
cis-1,3-Dichloropropene	ND		4.3	ug/m3			09/21/17 22:01	2.38
trans-1,3-Dichloropropene	ND		4.3	ug/m3			09/21/17 22:01	2.38
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		6.7	ug/m3			09/21/17 22:01	2.38
Ethylbenzene	ND		4.1	ug/m3			09/21/17 22:01	2.38
4-Ethyltoluene	ND		4.7	ug/m3			09/21/17 22:01	2.38
Hexachlorobutadiene	ND		51	ug/m3			09/21/17 22:01	2.38
2-Hexanone	ND		3.9	ug/m3			09/21/17 22:01	2.38
Methylene Chloride	7.8		3.3	ug/m3			09/21/17 22:01	2.38
4-Methyl-2-pentanone (MIBK)	ND		3.9	ug/m3			09/21/17 22:01	2.38
Styrene	ND		4.1	ug/m3			09/21/17 22:01	2.38
1,1,2,2-Tetrachloroethane	ND		6.5	ug/m3			09/21/17 22:01	2.38
Tetrachloroethene	12		6.5	ug/m3			09/21/17 22:01	2.38
Toluene	29		3.6	ug/m3			09/21/17 22:01	2.38
1,2,4-Trichlorobenzene	ND		35	ug/m3			09/21/17 22:01	2.38
1,1,1-Trichloroethane	ND		3.9	ug/m3			09/21/17 22:01	2.38
1,1,2-Trichloroethane	ND		5.2	ug/m3			09/21/17 22:01	2.38
Trichloroethene	ND		5.1	ug/m3			09/21/17 22:01	2.38
Trichlorofluoromethane	5.6		5.3	ug/m3			09/21/17 22:01	2.38
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		7.3	ug/m3			09/21/17 22:01	2.38
1,2,4-Trimethylbenzene	ND		9.4	ug/m3			09/21/17 22:01	2.38
1,3,5-Trimethylbenzene	ND		4.7	ug/m3			09/21/17 22:01	2.38
Vinyl acetate	ND		6.7	ug/m3			09/21/17 22:01	2.38
Vinyl chloride	ND		2.4	ug/m3			09/21/17 22:01	2.38
m,p-Xylene	12		8.3	ug/m3			09/21/17 22:01	2.38
o-Xylene	ND		4.1	ug/m3			09/21/17 22:01	2.38
Naphthalene	ND		10	ug/m3			09/21/17 22:01	2.38

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-03

Lab Sample ID: 320-31467-3

Date Collected: 09/06/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130		09/21/17 22:01	2.38
1,2-Dichloroethane-d4 (Surr)	105		70 - 130		09/21/17 22:01	2.38
Toluene-d8 (Surr)	111		70 - 130		09/21/17 22:01	2.38

Client Sample ID: SS-170906-RA-04

Lab Sample ID: 320-31467-4

Date Collected: 09/06/17 12:43

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	120		33	ppb v/v			09/21/17 22:54	6.54
Benzene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Benzyl chloride	ND		5.2	ppb v/v			09/21/17 22:54	6.54
Bromodichloromethane	ND		2.0	ppb v/v			09/21/17 22:54	6.54
Bromoform	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Bromomethane	ND		5.2	ppb v/v			09/21/17 22:54	6.54
2-Butanone (MEK)	ND		5.2	ppb v/v			09/21/17 22:54	6.54
Carbon disulfide	ND		5.2	ppb v/v			09/21/17 22:54	6.54
Carbon tetrachloride	ND		5.2	ppb v/v			09/21/17 22:54	6.54
Chlorobenzene	ND		2.0	ppb v/v			09/21/17 22:54	6.54
Dibromochloromethane	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Chloroethane	ND		5.2	ppb v/v			09/21/17 22:54	6.54
Chloroform	ND		2.0	ppb v/v			09/21/17 22:54	6.54
Chloromethane	ND		5.2	ppb v/v			09/21/17 22:54	6.54
1,2-Dibromoethane (EDB)	ND		5.2	ppb v/v			09/21/17 22:54	6.54
1,2-Dichlorobenzene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
1,3-Dichlorobenzene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
1,4-Dichlorobenzene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Dichlorodifluoromethane	ND		2.6	ppb v/v			09/21/17 22:54	6.54
1,1-Dichloroethane	ND		2.0	ppb v/v			09/21/17 22:54	6.54
1,2-Dichloroethane	ND		5.2	ppb v/v			09/21/17 22:54	6.54
1,1-Dichloroethene	ND		5.2	ppb v/v			09/21/17 22:54	6.54
cis-1,2-Dichloroethene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
trans-1,2-Dichloroethene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
1,2-Dichloropropane	ND		2.6	ppb v/v			09/21/17 22:54	6.54
cis-1,3-Dichloropropene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
trans-1,3-Dichloropropene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Ethylbenzene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
4-Ethyltoluene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Hexachlorobutadiene	ND		13	ppb v/v			09/21/17 22:54	6.54
2-Hexanone	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Methylene Chloride	ND		2.6	ppb v/v			09/21/17 22:54	6.54
4-Methyl-2-pentanone (MIBK)	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Styrene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
1,1,2,2-Tetrachloroethane	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Tetrachloroethene	6.1		2.6	ppb v/v			09/21/17 22:54	6.54
Toluene	8.3		2.6	ppb v/v			09/21/17 22:54	6.54

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-04

Lab Sample ID: 320-31467-4

Date Collected: 09/06/17 12:43

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		13	ppb v/v			09/21/17 22:54	6.54
1,1,1-Trichloroethane	ND		2.0	ppb v/v			09/21/17 22:54	6.54
1,1,2-Trichloroethane	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Trichloroethene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Trichlorofluoromethane	ND		2.6	ppb v/v			09/21/17 22:54	6.54
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.6	ppb v/v			09/21/17 22:54	6.54
1,2,4-Trimethylbenzene	ND		5.2	ppb v/v			09/21/17 22:54	6.54
1,3,5-Trimethylbenzene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Vinyl acetate	ND		5.2	ppb v/v			09/21/17 22:54	6.54
Vinyl chloride	ND		2.6	ppb v/v			09/21/17 22:54	6.54
m,p-Xylene	ND		5.2	ppb v/v			09/21/17 22:54	6.54
o-Xylene	ND		2.6	ppb v/v			09/21/17 22:54	6.54
Naphthalene	ND		5.2	ppb v/v			09/21/17 22:54	6.54
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	280		78	ug/m3			09/21/17 22:54	6.54
Benzene	ND		8.4	ug/m3			09/21/17 22:54	6.54
Benzyl chloride	ND		27	ug/m3			09/21/17 22:54	6.54
Bromodichloromethane	ND		13	ug/m3			09/21/17 22:54	6.54
Bromoform	ND		27	ug/m3			09/21/17 22:54	6.54
Bromomethane	ND		20	ug/m3			09/21/17 22:54	6.54
2-Butanone (MEK)	ND		15	ug/m3			09/21/17 22:54	6.54
Carbon disulfide	ND		16	ug/m3			09/21/17 22:54	6.54
Carbon tetrachloride	ND		33	ug/m3			09/21/17 22:54	6.54
Chlorobenzene	ND		9.0	ug/m3			09/21/17 22:54	6.54
Dibromochloromethane	ND		22	ug/m3			09/21/17 22:54	6.54
Chloroethane	ND		14	ug/m3			09/21/17 22:54	6.54
Chloroform	ND		9.6	ug/m3			09/21/17 22:54	6.54
Chloromethane	ND		11	ug/m3			09/21/17 22:54	6.54
1,2-Dibromoethane (EDB)	ND		40	ug/m3			09/21/17 22:54	6.54
1,2-Dichlorobenzene	ND		16	ug/m3			09/21/17 22:54	6.54
1,3-Dichlorobenzene	ND		16	ug/m3			09/21/17 22:54	6.54
1,4-Dichlorobenzene	ND		16	ug/m3			09/21/17 22:54	6.54
Dichlorodifluoromethane	ND		13	ug/m3			09/21/17 22:54	6.54
1,1-Dichloroethane	ND		7.9	ug/m3			09/21/17 22:54	6.54
1,2-Dichloroethane	ND		21	ug/m3			09/21/17 22:54	6.54
1,1-Dichloroethene	ND		21	ug/m3			09/21/17 22:54	6.54
cis-1,2-Dichloroethene	ND		10	ug/m3			09/21/17 22:54	6.54
trans-1,2-Dichloroethene	ND		10	ug/m3			09/21/17 22:54	6.54
1,2-Dichloropropane	ND		12	ug/m3			09/21/17 22:54	6.54
cis-1,3-Dichloropropene	ND		12	ug/m3			09/21/17 22:54	6.54
trans-1,3-Dichloropropene	ND		12	ug/m3			09/21/17 22:54	6.54
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		18	ug/m3			09/21/17 22:54	6.54
Ethylbenzene	ND		11	ug/m3			09/21/17 22:54	6.54
4-Ethyltoluene	ND		13	ug/m3			09/21/17 22:54	6.54
Hexachlorobutadiene	ND		140	ug/m3			09/21/17 22:54	6.54
2-Hexanone	ND		11	ug/m3			09/21/17 22:54	6.54
Methylene Chloride	ND		9.1	ug/m3			09/21/17 22:54	6.54
4-Methyl-2-pentanone (MIBK)	ND		11	ug/m3			09/21/17 22:54	6.54

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-04

Lab Sample ID: 320-31467-4

Date Collected: 09/06/17 12:43

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		11	ug/m3			09/21/17 22:54	6.54
1,1,2,2-Tetrachloroethane	ND		18	ug/m3			09/21/17 22:54	6.54
Tetrachloroethene	41		18	ug/m3			09/21/17 22:54	6.54
Toluene	31		9.9	ug/m3			09/21/17 22:54	6.54
1,2,4-Trichlorobenzene	ND		97	ug/m3			09/21/17 22:54	6.54
1,1,1-Trichloroethane	ND		11	ug/m3			09/21/17 22:54	6.54
1,1,2-Trichloroethane	ND		14	ug/m3			09/21/17 22:54	6.54
Trichloroethene	ND		14	ug/m3			09/21/17 22:54	6.54
Trichlorofluoromethane	ND		15	ug/m3			09/21/17 22:54	6.54
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20	ug/m3			09/21/17 22:54	6.54
1,2,4-Trimethylbenzene	ND		26	ug/m3			09/21/17 22:54	6.54
1,3,5-Trimethylbenzene	ND		13	ug/m3			09/21/17 22:54	6.54
Vinyl acetate	ND		18	ug/m3			09/21/17 22:54	6.54
Vinyl chloride	ND		6.7	ug/m3			09/21/17 22:54	6.54
m,p-Xylene	ND		23	ug/m3			09/21/17 22:54	6.54
o-Xylene	ND		11	ug/m3			09/21/17 22:54	6.54
Naphthalene	ND		27	ug/m3			09/21/17 22:54	6.54
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				09/21/17 22:54	6.54
1,2-Dichloroethane-d4 (Surr)	99		70 - 130				09/21/17 22:54	6.54
Toluene-d8 (Surr)	111		70 - 130				09/21/17 22:54	6.54

Client Sample ID: SS-170906-RA-05

Lab Sample ID: 320-31467-5

Date Collected: 09/06/17 12:58

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	23		5.0	ppb v/v			09/21/17 23:51	1
Benzene	ND		0.40	ppb v/v			09/21/17 23:51	1
Benzyl chloride	ND		0.80	ppb v/v			09/21/17 23:51	1
Bromodichloromethane	ND		0.30	ppb v/v			09/21/17 23:51	1
Bromoform	ND		0.40	ppb v/v			09/21/17 23:51	1
Bromomethane	ND		0.80	ppb v/v			09/21/17 23:51	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/21/17 23:51	1
Carbon disulfide	1.5		0.80	ppb v/v			09/21/17 23:51	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/21/17 23:51	1
Chlorobenzene	ND		0.30	ppb v/v			09/21/17 23:51	1
Dibromochloromethane	ND		0.40	ppb v/v			09/21/17 23:51	1
Chloroethane	ND		0.80	ppb v/v			09/21/17 23:51	1
Chloroform	ND		0.30	ppb v/v			09/21/17 23:51	1
Chloromethane	ND		0.80	ppb v/v			09/21/17 23:51	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/21/17 23:51	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 23:51	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 23:51	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 23:51	1
Dichlorodifluoromethane	ND		0.40	ppb v/v			09/21/17 23:51	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-05

Lab Sample ID: 320-31467-5

Date Collected: 09/06/17 12:58

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		0.30	ppb v/v			09/21/17 23:51	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/21/17 23:51	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/21/17 23:51	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/21/17 23:51	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/21/17 23:51	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/21/17 23:51	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/21/17 23:51	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/21/17 23:51	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/21/17 23:51	1
Ethylbenzene	ND		0.40	ppb v/v			09/21/17 23:51	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/21/17 23:51	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/21/17 23:51	1
2-Hexanone	ND		0.40	ppb v/v			09/21/17 23:51	1
Methylene Chloride	1.2		0.40	ppb v/v			09/21/17 23:51	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/21/17 23:51	1
Styrene	ND		0.40	ppb v/v			09/21/17 23:51	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/21/17 23:51	1
Tetrachloroethene	ND		0.40	ppb v/v			09/21/17 23:51	1
Toluene	ND		0.40	ppb v/v			09/21/17 23:51	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/21/17 23:51	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/21/17 23:51	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/21/17 23:51	1
Trichloroethene	ND		0.40	ppb v/v			09/21/17 23:51	1
Trichlorofluoromethane	0.46		0.40	ppb v/v			09/21/17 23:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/21/17 23:51	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/21/17 23:51	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/21/17 23:51	1
Vinyl acetate	ND		0.80	ppb v/v			09/21/17 23:51	1
Vinyl chloride	ND		0.40	ppb v/v			09/21/17 23:51	1
m,p-Xylene	ND		0.80	ppb v/v			09/21/17 23:51	1
o-Xylene	ND		0.40	ppb v/v			09/21/17 23:51	1
Naphthalene	ND		0.80	ppb v/v			09/21/17 23:51	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	54		12	ug/m3			09/21/17 23:51	1
Benzene	ND		1.3	ug/m3			09/21/17 23:51	1
Benzyl chloride	ND		4.1	ug/m3			09/21/17 23:51	1
Bromodichloromethane	ND		2.0	ug/m3			09/21/17 23:51	1
Bromoform	ND		4.1	ug/m3			09/21/17 23:51	1
Bromomethane	ND		3.1	ug/m3			09/21/17 23:51	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/21/17 23:51	1
Carbon disulfide	4.8		2.5	ug/m3			09/21/17 23:51	1
Carbon tetrachloride	ND		5.0	ug/m3			09/21/17 23:51	1
Chlorobenzene	ND		1.4	ug/m3			09/21/17 23:51	1
Dibromochloromethane	ND		3.4	ug/m3			09/21/17 23:51	1
Chloroethane	ND		2.1	ug/m3			09/21/17 23:51	1
Chloroform	ND		1.5	ug/m3			09/21/17 23:51	1
Chloromethane	ND		1.7	ug/m3			09/21/17 23:51	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/21/17 23:51	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-05

Lab Sample ID: 320-31467-5

Date Collected: 09/06/17 12:58

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 23:51	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 23:51	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 23:51	1
Dichlorodifluoromethane	ND		2.0	ug/m3			09/21/17 23:51	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/21/17 23:51	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/21/17 23:51	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/21/17 23:51	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/21/17 23:51	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/21/17 23:51	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/21/17 23:51	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/21/17 23:51	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/21/17 23:51	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/21/17 23:51	1
Ethylbenzene	ND		1.7	ug/m3			09/21/17 23:51	1
4-Ethyltoluene	ND		2.0	ug/m3			09/21/17 23:51	1
Hexachlorobutadiene	ND		21	ug/m3			09/21/17 23:51	1
2-Hexanone	ND		1.6	ug/m3			09/21/17 23:51	1
Methylene Chloride	4.3		1.4	ug/m3			09/21/17 23:51	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/21/17 23:51	1
Styrene	ND		1.7	ug/m3			09/21/17 23:51	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/21/17 23:51	1
Tetrachloroethene	ND		2.7	ug/m3			09/21/17 23:51	1
Toluene	ND		1.5	ug/m3			09/21/17 23:51	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/21/17 23:51	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/21/17 23:51	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/21/17 23:51	1
Trichloroethene	ND		2.1	ug/m3			09/21/17 23:51	1
Trichlorofluoromethane	2.6		2.2	ug/m3			09/21/17 23:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/21/17 23:51	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/21/17 23:51	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/21/17 23:51	1
Vinyl acetate	ND		2.8	ug/m3			09/21/17 23:51	1
Vinyl chloride	ND		1.0	ug/m3			09/21/17 23:51	1
m,p-Xylene	ND		3.5	ug/m3			09/21/17 23:51	1
o-Xylene	ND		1.7	ug/m3			09/21/17 23:51	1
Naphthalene	ND		4.2	ug/m3			09/21/17 23:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130		09/21/17 23:51	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		09/21/17 23:51	1
Toluene-d8 (Surr)	113		70 - 130		09/21/17 23:51	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-06

Lab Sample ID: 320-31467-6

Date Collected: 09/06/17 10:59

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	19		5.0	ppb v/v			09/22/17 00:47	1
Benzene	0.79		0.40	ppb v/v			09/22/17 00:47	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 00:47	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 00:47	1
Bromoform	ND		0.40	ppb v/v			09/22/17 00:47	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 00:47	1
2-Butanone (MEK)	5.3		0.80	ppb v/v			09/22/17 00:47	1
Carbon disulfide	4.8		0.80	ppb v/v			09/22/17 00:47	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 00:47	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 00:47	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 00:47	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 00:47	1
Chloroform	0.43		0.30	ppb v/v			09/22/17 00:47	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 00:47	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 00:47	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 00:47	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 00:47	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 00:47	1
Dichlorodifluoromethane	0.88		0.40	ppb v/v			09/22/17 00:47	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 00:47	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 00:47	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 00:47	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 00:47	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 00:47	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 00:47	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 00:47	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 00:47	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 00:47	1
Ethylbenzene	1.6		0.40	ppb v/v			09/22/17 00:47	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 00:47	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 00:47	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 00:47	1
Methylene Chloride	6.9		0.40	ppb v/v			09/22/17 00:47	1
4-Methyl-2-pentanone (MIBK)	8.7		0.40	ppb v/v			09/22/17 00:47	1
Styrene	ND		0.40	ppb v/v			09/22/17 00:47	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 00:47	1
Tetrachloroethene	3.1		0.40	ppb v/v			09/22/17 00:47	1
Toluene	11		0.40	ppb v/v			09/22/17 00:47	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 00:47	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 00:47	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 00:47	1
Trichloroethene	0.76		0.40	ppb v/v			09/22/17 00:47	1
Trichlorofluoromethane	1.0		0.40	ppb v/v			09/22/17 00:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 00:47	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 00:47	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 00:47	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 00:47	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 00:47	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-06

Lab Sample ID: 320-31467-6

Date Collected: 09/06/17 10:59

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	3.9		0.80	ppb v/v			09/22/17 00:47	1
o-Xylene	1.2		0.40	ppb v/v			09/22/17 00:47	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 00:47	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	44		12	ug/m3			09/22/17 00:47	1
Benzene	2.5		1.3	ug/m3			09/22/17 00:47	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 00:47	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 00:47	1
Bromoform	ND		4.1	ug/m3			09/22/17 00:47	1
Bromomethane	ND		3.1	ug/m3			09/22/17 00:47	1
2-Butanone (MEK)	16		2.4	ug/m3			09/22/17 00:47	1
Carbon disulfide	15		2.5	ug/m3			09/22/17 00:47	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 00:47	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 00:47	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 00:47	1
Chloroethane	ND		2.1	ug/m3			09/22/17 00:47	1
Chloroform	2.1		1.5	ug/m3			09/22/17 00:47	1
Chloromethane	ND		1.7	ug/m3			09/22/17 00:47	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 00:47	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 00:47	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 00:47	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 00:47	1
Dichlorodifluoromethane	4.4		2.0	ug/m3			09/22/17 00:47	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 00:47	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 00:47	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 00:47	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 00:47	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 00:47	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 00:47	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 00:47	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 00:47	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 00:47	1
Ethylbenzene	6.8		1.7	ug/m3			09/22/17 00:47	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 00:47	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 00:47	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 00:47	1
Methylene Chloride	24		1.4	ug/m3			09/22/17 00:47	1
4-Methyl-2-pentanone (MIBK)	35		1.6	ug/m3			09/22/17 00:47	1
Styrene	ND		1.7	ug/m3			09/22/17 00:47	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 00:47	1
Tetrachloroethene	21		2.7	ug/m3			09/22/17 00:47	1
Toluene	42		1.5	ug/m3			09/22/17 00:47	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 00:47	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 00:47	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 00:47	1
Trichloroethene	4.1		2.1	ug/m3			09/22/17 00:47	1
Trichlorofluoromethane	5.8		2.2	ug/m3			09/22/17 00:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 00:47	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-06

Lab Sample ID: 320-31467-6

Date Collected: 09/06/17 10:59

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 00:47	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 00:47	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 00:47	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 00:47	1
m,p-Xylene	17		3.5	ug/m3			09/22/17 00:47	1
o-Xylene	5.3		1.7	ug/m3			09/22/17 00:47	1
Naphthalene	ND		4.2	ug/m3			09/22/17 00:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				09/22/17 00:47	1
1,2-Dichloroethane-d4 (Surr)	103		70 - 130				09/22/17 00:47	1
Toluene-d8 (Surr)	111		70 - 130				09/22/17 00:47	1

Client Sample ID: SS-170906-RA-07

Lab Sample ID: 320-31467-7

Date Collected: 09/06/17 11:14

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	34		5.0	ppb v/v			09/22/17 01:44	1
Benzene	0.46		0.40	ppb v/v			09/22/17 01:44	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 01:44	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 01:44	1
Bromoform	ND		0.40	ppb v/v			09/22/17 01:44	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 01:44	1
2-Butanone (MEK)	2.8		0.80	ppb v/v			09/22/17 01:44	1
Carbon disulfide	2.0		0.80	ppb v/v			09/22/17 01:44	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 01:44	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 01:44	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 01:44	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 01:44	1
Chloroform	ND		0.30	ppb v/v			09/22/17 01:44	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 01:44	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 01:44	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 01:44	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 01:44	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 01:44	1
Dichlorodifluoromethane	4.8		0.40	ppb v/v			09/22/17 01:44	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 01:44	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 01:44	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 01:44	1
cis-1,2-Dichloroethene	1.1		0.40	ppb v/v			09/22/17 01:44	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 01:44	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 01:44	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 01:44	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 01:44	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 01:44	1
Ethylbenzene	0.56		0.40	ppb v/v			09/22/17 01:44	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-07

Lab Sample ID: 320-31467-7

Date Collected: 09/06/17 11:14

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 01:44	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 01:44	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 01:44	1
Methylene Chloride	2.0		0.40	ppb v/v			09/22/17 01:44	1
4-Methyl-2-pentanone (MIBK)	0.50		0.40	ppb v/v			09/22/17 01:44	1
Styrene	ND		0.40	ppb v/v			09/22/17 01:44	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 01:44	1
Tetrachloroethene	5.4		0.40	ppb v/v			09/22/17 01:44	1
Toluene	5.9		0.40	ppb v/v			09/22/17 01:44	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 01:44	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 01:44	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 01:44	1
Trichloroethene	0.53		0.40	ppb v/v			09/22/17 01:44	1
Trichlorofluoromethane	0.49		0.40	ppb v/v			09/22/17 01:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 01:44	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 01:44	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 01:44	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 01:44	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 01:44	1
m,p-Xylene	2.0		0.80	ppb v/v			09/22/17 01:44	1
o-Xylene	0.78		0.40	ppb v/v			09/22/17 01:44	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 01:44	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	80		12	ug/m3			09/22/17 01:44	1
Benzene	1.5		1.3	ug/m3			09/22/17 01:44	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 01:44	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 01:44	1
Bromoform	ND		4.1	ug/m3			09/22/17 01:44	1
Bromomethane	ND		3.1	ug/m3			09/22/17 01:44	1
2-Butanone (MEK)	8.1		2.4	ug/m3			09/22/17 01:44	1
Carbon disulfide	6.2		2.5	ug/m3			09/22/17 01:44	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 01:44	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 01:44	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 01:44	1
Chloroethane	ND		2.1	ug/m3			09/22/17 01:44	1
Chloroform	ND		1.5	ug/m3			09/22/17 01:44	1
Chloromethane	ND		1.7	ug/m3			09/22/17 01:44	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 01:44	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 01:44	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 01:44	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 01:44	1
Dichlorodifluoromethane	24		2.0	ug/m3			09/22/17 01:44	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 01:44	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 01:44	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 01:44	1
cis-1,2-Dichloroethene	4.6		1.6	ug/m3			09/22/17 01:44	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 01:44	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 01:44	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-07

Lab Sample ID: 320-31467-7

Date Collected: 09/06/17 11:14

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 01:44	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 01:44	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 01:44	1
Ethylbenzene	2.4		1.7	ug/m3			09/22/17 01:44	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 01:44	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 01:44	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 01:44	1
Methylene Chloride	7.1		1.4	ug/m3			09/22/17 01:44	1
4-Methyl-2-pentanone (MIBK)	2.1		1.6	ug/m3			09/22/17 01:44	1
Styrene	ND		1.7	ug/m3			09/22/17 01:44	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 01:44	1
Tetrachloroethene	37		2.7	ug/m3			09/22/17 01:44	1
Toluene	22		1.5	ug/m3			09/22/17 01:44	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 01:44	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 01:44	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 01:44	1
Trichloroethene	2.8		2.1	ug/m3			09/22/17 01:44	1
Trichlorofluoromethane	2.8		2.2	ug/m3			09/22/17 01:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 01:44	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 01:44	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 01:44	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 01:44	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 01:44	1
m,p-Xylene	8.8		3.5	ug/m3			09/22/17 01:44	1
o-Xylene	3.4		1.7	ug/m3			09/22/17 01:44	1
Naphthalene	ND		4.2	ug/m3			09/22/17 01:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130				09/22/17 01:44	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130				09/22/17 01:44	1
Toluene-d8 (Surr)	110		70 - 130				09/22/17 01:44	1

Client Sample ID: SS-170906-RA-08

Lab Sample ID: 320-31467-8

Date Collected: 09/06/17 11:18

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	9.7		5.0	ppb v/v			09/22/17 02:42	1
Benzene	0.44		0.40	ppb v/v			09/22/17 02:42	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 02:42	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 02:42	1
Bromoform	ND		0.40	ppb v/v			09/22/17 02:42	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 02:42	1
2-Butanone (MEK)	0.88		0.80	ppb v/v			09/22/17 02:42	1
Carbon disulfide	6.1		0.80	ppb v/v			09/22/17 02:42	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 02:42	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 02:42	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-08

Lab Sample ID: 320-31467-8

Date Collected: 09/06/17 11:18

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 02:42	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 02:42	1
Chloroform	ND		0.30	ppb v/v			09/22/17 02:42	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 02:42	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 02:42	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 02:42	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 02:42	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 02:42	1
Dichlorodifluoromethane	0.58		0.40	ppb v/v			09/22/17 02:42	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 02:42	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 02:42	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 02:42	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 02:42	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 02:42	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 02:42	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 02:42	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 02:42	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 02:42	1
Ethylbenzene	0.57		0.40	ppb v/v			09/22/17 02:42	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 02:42	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 02:42	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 02:42	1
Methylene Chloride	10		0.40	ppb v/v			09/22/17 02:42	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 02:42	1
Styrene	ND		0.40	ppb v/v			09/22/17 02:42	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 02:42	1
Tetrachloroethene	18		0.40	ppb v/v			09/22/17 02:42	1
Toluene	6.2		0.40	ppb v/v			09/22/17 02:42	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 02:42	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 02:42	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 02:42	1
Trichloroethene	1.3		0.40	ppb v/v			09/22/17 02:42	1
Trichlorofluoromethane	0.93		0.40	ppb v/v			09/22/17 02:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 02:42	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 02:42	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 02:42	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 02:42	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 02:42	1
m,p-Xylene	1.3		0.80	ppb v/v			09/22/17 02:42	1
o-Xylene	0.42		0.40	ppb v/v			09/22/17 02:42	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 02:42	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	23		12	ug/m3			09/22/17 02:42	1
Benzene	1.4		1.3	ug/m3			09/22/17 02:42	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 02:42	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 02:42	1
Bromoform	ND		4.1	ug/m3			09/22/17 02:42	1
Bromomethane	ND		3.1	ug/m3			09/22/17 02:42	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-08

Lab Sample ID: 320-31467-8

Date Collected: 09/06/17 11:18

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	2.6		2.4	ug/m3			09/22/17 02:42	1
Carbon disulfide	19		2.5	ug/m3			09/22/17 02:42	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 02:42	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 02:42	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 02:42	1
Chloroethane	ND		2.1	ug/m3			09/22/17 02:42	1
Chloroform	ND		1.5	ug/m3			09/22/17 02:42	1
Chloromethane	ND		1.7	ug/m3			09/22/17 02:42	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 02:42	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 02:42	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 02:42	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 02:42	1
Dichlorodifluoromethane	2.9		2.0	ug/m3			09/22/17 02:42	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 02:42	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 02:42	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 02:42	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 02:42	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 02:42	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 02:42	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 02:42	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 02:42	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 02:42	1
Ethylbenzene	2.5		1.7	ug/m3			09/22/17 02:42	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 02:42	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 02:42	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 02:42	1
Methylene Chloride	36		1.4	ug/m3			09/22/17 02:42	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 02:42	1
Styrene	ND		1.7	ug/m3			09/22/17 02:42	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 02:42	1
Tetrachloroethene	120		2.7	ug/m3			09/22/17 02:42	1
Toluene	23		1.5	ug/m3			09/22/17 02:42	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 02:42	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 02:42	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 02:42	1
Trichloroethene	6.9		2.1	ug/m3			09/22/17 02:42	1
Trichlorofluoromethane	5.2		2.2	ug/m3			09/22/17 02:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 02:42	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 02:42	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 02:42	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 02:42	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 02:42	1
m,p-Xylene	5.7		3.5	ug/m3			09/22/17 02:42	1
o-Xylene	1.8		1.7	ug/m3			09/22/17 02:42	1
Naphthalene	ND		4.2	ug/m3			09/22/17 02:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130		09/22/17 02:42	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130		09/22/17 02:42	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-08

Lab Sample ID: 320-31467-8

Date Collected: 09/06/17 11:18

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	111		70 - 130		09/22/17 02:42	1

Client Sample ID: SS-170906-RA-09

Lab Sample ID: 320-31467-9

Date Collected: 09/06/17 12:37

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	24		5.0	ppb v/v			09/22/17 07:58	1
Benzene	0.78		0.40	ppb v/v			09/22/17 07:58	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 07:58	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 07:58	1
Bromoform	ND		0.40	ppb v/v			09/22/17 07:58	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 07:58	1
2-Butanone (MEK)	2.5		0.80	ppb v/v			09/22/17 07:58	1
Carbon disulfide	39		0.80	ppb v/v			09/22/17 07:58	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 07:58	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 07:58	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 07:58	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 07:58	1
Chloroform	ND		0.30	ppb v/v			09/22/17 07:58	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 07:58	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 07:58	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 07:58	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 07:58	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 07:58	1
Dichlorodifluoromethane	0.53		0.40	ppb v/v			09/22/17 07:58	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 07:58	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 07:58	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 07:58	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 07:58	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 07:58	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 07:58	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 07:58	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 07:58	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 07:58	1
Ethylbenzene	0.76		0.40	ppb v/v			09/22/17 07:58	1
4-Ethyltoluene	1.1		0.40	ppb v/v			09/22/17 07:58	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 07:58	1
2-Hexanone	0.42		0.40	ppb v/v			09/22/17 07:58	1
Methylene Chloride	3.3		0.40	ppb v/v			09/22/17 07:58	1
4-Methyl-2-pentanone (MIBK)	0.92		0.40	ppb v/v			09/22/17 07:58	1
Styrene	ND		0.40	ppb v/v			09/22/17 07:58	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 07:58	1
Tetrachloroethene	80		0.40	ppb v/v			09/22/17 07:58	1
Toluene	7.0		0.40	ppb v/v			09/22/17 07:58	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 07:58	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-09

Lab Sample ID: 320-31467-9

Date Collected: 09/06/17 12:37

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 07:58	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 07:58	1
Trichloroethene	0.84		0.40	ppb v/v			09/22/17 07:58	1
Trichlorofluoromethane	0.78		0.40	ppb v/v			09/22/17 07:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 07:58	1
1,2,4-Trimethylbenzene	1.0		0.80	ppb v/v			09/22/17 07:58	1
1,3,5-Trimethylbenzene	0.61		0.40	ppb v/v			09/22/17 07:58	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 07:58	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 07:58	1
m,p-Xylene	2.8		0.80	ppb v/v			09/22/17 07:58	1
o-Xylene	1.2		0.40	ppb v/v			09/22/17 07:58	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 07:58	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	57		12	ug/m3			09/22/17 07:58	1
Benzene	2.5		1.3	ug/m3			09/22/17 07:58	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 07:58	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 07:58	1
Bromoform	ND		4.1	ug/m3			09/22/17 07:58	1
Bromomethane	ND		3.1	ug/m3			09/22/17 07:58	1
2-Butanone (MEK)	7.3		2.4	ug/m3			09/22/17 07:58	1
Carbon disulfide	120		2.5	ug/m3			09/22/17 07:58	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 07:58	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 07:58	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 07:58	1
Chloroethane	ND		2.1	ug/m3			09/22/17 07:58	1
Chloroform	ND		1.5	ug/m3			09/22/17 07:58	1
Chloromethane	ND		1.7	ug/m3			09/22/17 07:58	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 07:58	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 07:58	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 07:58	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 07:58	1
Dichlorodifluoromethane	2.6		2.0	ug/m3			09/22/17 07:58	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 07:58	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 07:58	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 07:58	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 07:58	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 07:58	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 07:58	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 07:58	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 07:58	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 07:58	1
Ethylbenzene	3.3		1.7	ug/m3			09/22/17 07:58	1
4-Ethyltoluene	5.4		2.0	ug/m3			09/22/17 07:58	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 07:58	1
2-Hexanone	1.7		1.6	ug/m3			09/22/17 07:58	1
Methylene Chloride	12		1.4	ug/m3			09/22/17 07:58	1
4-Methyl-2-pentanone (MIBK)	3.8		1.6	ug/m3			09/22/17 07:58	1
Styrene	ND		1.7	ug/m3			09/22/17 07:58	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-09

Lab Sample ID: 320-31467-9

Date Collected: 09/06/17 12:37

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 07:58	1
Tetrachloroethene	540		2.7	ug/m3			09/22/17 07:58	1
Toluene	27		1.5	ug/m3			09/22/17 07:58	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 07:58	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 07:58	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 07:58	1
Trichloroethene	4.5		2.1	ug/m3			09/22/17 07:58	1
Trichlorofluoromethane	4.4		2.2	ug/m3			09/22/17 07:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 07:58	1
1,2,4-Trimethylbenzene	4.9		3.9	ug/m3			09/22/17 07:58	1
1,3,5-Trimethylbenzene	3.0		2.0	ug/m3			09/22/17 07:58	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 07:58	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 07:58	1
m,p-Xylene	12		3.5	ug/m3			09/22/17 07:58	1
o-Xylene	5.2		1.7	ug/m3			09/22/17 07:58	1
Naphthalene	ND		4.2	ug/m3			09/22/17 07:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130		09/22/17 07:58	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 130		09/22/17 07:58	1
Toluene-d8 (Surr)	110		70 - 130		09/22/17 07:58	1

Client Sample ID: G-170907-RA-11

Lab Sample ID: 320-31467-10

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	6.7		5.0	ppb v/v			09/22/17 08:55	1
Benzene	ND		0.40	ppb v/v			09/22/17 08:55	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 08:55	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 08:55	1
Bromoform	ND		0.40	ppb v/v			09/22/17 08:55	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 08:55	1
2-Butanone (MEK)	0.83		0.80	ppb v/v			09/22/17 08:55	1
Carbon disulfide	5.9		0.80	ppb v/v			09/22/17 08:55	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 08:55	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 08:55	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 08:55	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 08:55	1
Chloroform	ND		0.30	ppb v/v			09/22/17 08:55	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 08:55	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 08:55	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 08:55	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 08:55	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 08:55	1
Dichlorodifluoromethane	6.7		0.40	ppb v/v			09/22/17 08:55	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 08:55	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-11

Lab Sample ID: 320-31467-10

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 08:55	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 08:55	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 08:55	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 08:55	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 08:55	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 08:55	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 08:55	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 08:55	1
Ethylbenzene	0.57		0.40	ppb v/v			09/22/17 08:55	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 08:55	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 08:55	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 08:55	1
Methylene Chloride	ND		0.40	ppb v/v			09/22/17 08:55	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 08:55	1
Styrene	ND		0.40	ppb v/v			09/22/17 08:55	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 08:55	1
Tetrachloroethene	20		0.40	ppb v/v			09/22/17 08:55	1
Toluene	2.8		0.40	ppb v/v			09/22/17 08:55	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 08:55	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 08:55	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 08:55	1
Trichloroethene	1.1		0.40	ppb v/v			09/22/17 08:55	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/22/17 08:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 08:55	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 08:55	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 08:55	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 08:55	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 08:55	1
m,p-Xylene	1.5		0.80	ppb v/v			09/22/17 08:55	1
o-Xylene	0.42		0.40	ppb v/v			09/22/17 08:55	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 08:55	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	16		12	ug/m3			09/22/17 08:55	1
Benzene	ND		1.3	ug/m3			09/22/17 08:55	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 08:55	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 08:55	1
Bromoform	ND		4.1	ug/m3			09/22/17 08:55	1
Bromomethane	ND		3.1	ug/m3			09/22/17 08:55	1
2-Butanone (MEK)	2.4		2.4	ug/m3			09/22/17 08:55	1
Carbon disulfide	18		2.5	ug/m3			09/22/17 08:55	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 08:55	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 08:55	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 08:55	1
Chloroethane	ND		2.1	ug/m3			09/22/17 08:55	1
Chloroform	ND		1.5	ug/m3			09/22/17 08:55	1
Chloromethane	ND		1.7	ug/m3			09/22/17 08:55	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 08:55	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 08:55	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-11

Lab Sample ID: 320-31467-10

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 08:55	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 08:55	1
Dichlorodifluoromethane	33		2.0	ug/m3			09/22/17 08:55	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 08:55	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 08:55	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 08:55	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 08:55	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 08:55	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 08:55	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 08:55	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 08:55	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 08:55	1
Ethylbenzene	2.5		1.7	ug/m3			09/22/17 08:55	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 08:55	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 08:55	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 08:55	1
Methylene Chloride	ND		1.4	ug/m3			09/22/17 08:55	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 08:55	1
Styrene	ND		1.7	ug/m3			09/22/17 08:55	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 08:55	1
Tetrachloroethene	140		2.7	ug/m3			09/22/17 08:55	1
Toluene	11		1.5	ug/m3			09/22/17 08:55	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 08:55	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 08:55	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 08:55	1
Trichloroethene	5.9		2.1	ug/m3			09/22/17 08:55	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/22/17 08:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 08:55	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 08:55	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 08:55	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 08:55	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 08:55	1
m,p-Xylene	6.7		3.5	ug/m3			09/22/17 08:55	1
o-Xylene	1.8		1.7	ug/m3			09/22/17 08:55	1
Naphthalene	ND		4.2	ug/m3			09/22/17 08:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130				09/22/17 08:55	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130				09/22/17 08:55	1
Toluene-d8 (Surr)	111		70 - 130				09/22/17 08:55	1

Client Sample ID: G-170907-RA-12

Lab Sample ID: 320-31467-11

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	13		5.0	ppb v/v			09/22/17 00:11	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-12

Lab Sample ID: 320-31467-11

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.44		0.40	ppb v/v			09/22/17 00:11	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 00:11	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 00:11	1
Bromoform	ND		0.40	ppb v/v			09/22/17 00:11	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 00:11	1
2-Butanone (MEK)	2.2		0.80	ppb v/v			09/22/17 00:11	1
Carbon disulfide	11		0.80	ppb v/v			09/22/17 00:11	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 00:11	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 00:11	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 00:11	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 00:11	1
Chloroform	ND		0.30	ppb v/v			09/22/17 00:11	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 00:11	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 00:11	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 00:11	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 00:11	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 00:11	1
Dichlorodifluoromethane	15		0.40	ppb v/v			09/22/17 00:11	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 00:11	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 00:11	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 00:11	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 00:11	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 00:11	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 00:11	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 00:11	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 00:11	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 00:11	1
Ethylbenzene	0.77		0.40	ppb v/v			09/22/17 00:11	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 00:11	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 00:11	1
2-Hexanone	0.59		0.40	ppb v/v			09/22/17 00:11	1
Methylene Chloride	ND		0.40	ppb v/v			09/22/17 00:11	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 00:11	1
Styrene	ND		0.40	ppb v/v			09/22/17 00:11	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 00:11	1
Tetrachloroethene	29		0.40	ppb v/v			09/22/17 00:11	1
Toluene	2.5		0.40	ppb v/v			09/22/17 00:11	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 00:11	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 00:11	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 00:11	1
Trichloroethene	0.86		0.40	ppb v/v			09/22/17 00:11	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/22/17 00:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 00:11	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 00:11	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 00:11	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 00:11	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 00:11	1
m,p-Xylene	2.2		0.80	ppb v/v			09/22/17 00:11	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-12

Lab Sample ID: 320-31467-11

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	0.98		0.40	ppb v/v			09/22/17 00:11	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 00:11	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	31		12	ug/m3			09/22/17 00:11	1
Benzene	1.4		1.3	ug/m3			09/22/17 00:11	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 00:11	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 00:11	1
Bromoform	ND		4.1	ug/m3			09/22/17 00:11	1
Bromomethane	ND		3.1	ug/m3			09/22/17 00:11	1
2-Butanone (MEK)	6.6		2.4	ug/m3			09/22/17 00:11	1
Carbon disulfide	35		2.5	ug/m3			09/22/17 00:11	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 00:11	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 00:11	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 00:11	1
Chloroethane	ND		2.1	ug/m3			09/22/17 00:11	1
Chloroform	ND		1.5	ug/m3			09/22/17 00:11	1
Chloromethane	ND		1.7	ug/m3			09/22/17 00:11	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 00:11	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 00:11	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 00:11	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 00:11	1
Dichlorodifluoromethane	76		2.0	ug/m3			09/22/17 00:11	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 00:11	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 00:11	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 00:11	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 00:11	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 00:11	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 00:11	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 00:11	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 00:11	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 00:11	1
Ethylbenzene	3.3		1.7	ug/m3			09/22/17 00:11	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 00:11	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 00:11	1
2-Hexanone	2.4		1.6	ug/m3			09/22/17 00:11	1
Methylene Chloride	ND		1.4	ug/m3			09/22/17 00:11	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 00:11	1
Styrene	ND		1.7	ug/m3			09/22/17 00:11	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 00:11	1
Tetrachloroethene	200		2.7	ug/m3			09/22/17 00:11	1
Toluene	9.4		1.5	ug/m3			09/22/17 00:11	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 00:11	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 00:11	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 00:11	1
Trichloroethene	4.6		2.1	ug/m3			09/22/17 00:11	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/22/17 00:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 00:11	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 00:11	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-12

Lab Sample ID: 320-31467-11

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 00:11	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 00:11	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 00:11	1
m,p-Xylene	9.5		3.5	ug/m3			09/22/17 00:11	1
o-Xylene	4.2		1.7	ug/m3			09/22/17 00:11	1
Naphthalene	ND		4.2	ug/m3			09/22/17 00:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130				09/22/17 00:11	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130				09/22/17 00:11	1
Toluene-d8 (Surr)	98		70 - 130				09/22/17 00:11	1

Client Sample ID: G-170907-RA-13

Lab Sample ID: 320-31467-12

Date Collected: 09/07/17 09:55

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	16		5.0	ppb v/v			09/22/17 01:03	1
Benzene	0.94		0.40	ppb v/v			09/22/17 01:03	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 01:03	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 01:03	1
Bromoform	ND		0.40	ppb v/v			09/22/17 01:03	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 01:03	1
2-Butanone (MEK)	2.1		0.80	ppb v/v			09/22/17 01:03	1
Carbon disulfide	3.4		0.80	ppb v/v			09/22/17 01:03	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 01:03	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 01:03	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 01:03	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 01:03	1
Chloroform	ND		0.30	ppb v/v			09/22/17 01:03	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 01:03	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 01:03	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 01:03	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 01:03	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 01:03	1
Dichlorodifluoromethane	0.62		0.40	ppb v/v			09/22/17 01:03	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 01:03	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 01:03	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 01:03	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 01:03	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 01:03	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 01:03	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 01:03	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 01:03	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 01:03	1
Ethylbenzene	1.3		0.40	ppb v/v			09/22/17 01:03	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 01:03	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-13

Lab Sample ID: 320-31467-12

Date Collected: 09/07/17 09:55

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 01:03	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 01:03	1
Methylene Chloride	0.50		0.40	ppb v/v			09/22/17 01:03	1
4-Methyl-2-pentanone (MIBK)	0.86		0.40	ppb v/v			09/22/17 01:03	1
Styrene	ND		0.40	ppb v/v			09/22/17 01:03	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 01:03	1
Tetrachloroethene	14		0.40	ppb v/v			09/22/17 01:03	1
Toluene	6.1		0.40	ppb v/v			09/22/17 01:03	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 01:03	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 01:03	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 01:03	1
Trichloroethene	0.80		0.40	ppb v/v			09/22/17 01:03	1
Trichlorofluoromethane	0.49		0.40	ppb v/v			09/22/17 01:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 01:03	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 01:03	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 01:03	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 01:03	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 01:03	1
m,p-Xylene	4.3		0.80	ppb v/v			09/22/17 01:03	1
o-Xylene	1.3		0.40	ppb v/v			09/22/17 01:03	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 01:03	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	38		12	ug/m3			09/22/17 01:03	1
Benzene	3.0		1.3	ug/m3			09/22/17 01:03	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 01:03	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 01:03	1
Bromoform	ND		4.1	ug/m3			09/22/17 01:03	1
Bromomethane	ND		3.1	ug/m3			09/22/17 01:03	1
2-Butanone (MEK)	6.2		2.4	ug/m3			09/22/17 01:03	1
Carbon disulfide	11		2.5	ug/m3			09/22/17 01:03	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 01:03	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 01:03	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 01:03	1
Chloroethane	ND		2.1	ug/m3			09/22/17 01:03	1
Chloroform	ND		1.5	ug/m3			09/22/17 01:03	1
Chloromethane	ND		1.7	ug/m3			09/22/17 01:03	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 01:03	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 01:03	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 01:03	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 01:03	1
Dichlorodifluoromethane	3.1		2.0	ug/m3			09/22/17 01:03	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 01:03	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 01:03	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 01:03	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 01:03	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 01:03	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 01:03	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 01:03	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-13

Lab Sample ID: 320-31467-12

Date Collected: 09/07/17 09:55

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 01:03	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 01:03	1
Ethylbenzene	5.6		1.7	ug/m3			09/22/17 01:03	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 01:03	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 01:03	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 01:03	1
Methylene Chloride	1.7		1.4	ug/m3			09/22/17 01:03	1
4-Methyl-2-pentanone (MIBK)	3.5		1.6	ug/m3			09/22/17 01:03	1
Styrene	ND		1.7	ug/m3			09/22/17 01:03	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 01:03	1
Tetrachloroethene	93		2.7	ug/m3			09/22/17 01:03	1
Toluene	23		1.5	ug/m3			09/22/17 01:03	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 01:03	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 01:03	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 01:03	1
Trichloroethene	4.3		2.1	ug/m3			09/22/17 01:03	1
Trichlorofluoromethane	2.8		2.2	ug/m3			09/22/17 01:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 01:03	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 01:03	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 01:03	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 01:03	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 01:03	1
m,p-Xylene	19		3.5	ug/m3			09/22/17 01:03	1
o-Xylene	5.9		1.7	ug/m3			09/22/17 01:03	1
Naphthalene	ND		4.2	ug/m3			09/22/17 01:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130		09/22/17 01:03	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130		09/22/17 01:03	1
Toluene-d8 (Surr)	98		70 - 130		09/22/17 01:03	1

Client Sample ID: G-170907-RA-14

Lab Sample ID: 320-31467-13

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	18		5.0	ppb v/v			09/22/17 01:56	1
Benzene	0.80		0.40	ppb v/v			09/22/17 01:56	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 01:56	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 01:56	1
Bromoform	ND		0.40	ppb v/v			09/22/17 01:56	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 01:56	1
2-Butanone (MEK)	2.0		0.80	ppb v/v			09/22/17 01:56	1
Carbon disulfide	3.2		0.80	ppb v/v			09/22/17 01:56	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 01:56	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 01:56	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 01:56	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-14

Lab Sample ID: 320-31467-13

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.80	ppb v/v			09/22/17 01:56	1
Chloroform	ND		0.30	ppb v/v			09/22/17 01:56	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 01:56	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 01:56	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 01:56	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 01:56	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 01:56	1
Dichlorodifluoromethane	0.49		0.40	ppb v/v			09/22/17 01:56	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 01:56	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 01:56	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 01:56	1
cis-1,2-Dichloroethene	1.9		0.40	ppb v/v			09/22/17 01:56	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 01:56	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 01:56	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 01:56	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 01:56	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 01:56	1
Ethylbenzene	0.59		0.40	ppb v/v			09/22/17 01:56	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 01:56	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 01:56	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 01:56	1
Methylene Chloride	0.61		0.40	ppb v/v			09/22/17 01:56	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 01:56	1
Styrene	ND		0.40	ppb v/v			09/22/17 01:56	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 01:56	1
Tetrachloroethene	1.1		0.40	ppb v/v			09/22/17 01:56	1
Toluene	8.2		0.40	ppb v/v			09/22/17 01:56	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 01:56	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 01:56	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 01:56	1
Trichloroethene	0.92		0.40	ppb v/v			09/22/17 01:56	1
Trichlorofluoromethane	0.40		0.40	ppb v/v			09/22/17 01:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 01:56	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 01:56	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 01:56	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 01:56	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 01:56	1
m,p-Xylene	1.1		0.80	ppb v/v			09/22/17 01:56	1
o-Xylene	ND		0.40	ppb v/v			09/22/17 01:56	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 01:56	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	44		12	ug/m3			09/22/17 01:56	1
Benzene	2.6		1.3	ug/m3			09/22/17 01:56	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 01:56	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 01:56	1
Bromoform	ND		4.1	ug/m3			09/22/17 01:56	1
Bromomethane	ND		3.1	ug/m3			09/22/17 01:56	1
2-Butanone (MEK)	6.0		2.4	ug/m3			09/22/17 01:56	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-14

Lab Sample ID: 320-31467-13

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	9.9		2.5	ug/m3			09/22/17 01:56	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 01:56	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 01:56	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 01:56	1
Chloroethane	ND		2.1	ug/m3			09/22/17 01:56	1
Chloroform	ND		1.5	ug/m3			09/22/17 01:56	1
Chloromethane	ND		1.7	ug/m3			09/22/17 01:56	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 01:56	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 01:56	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 01:56	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 01:56	1
Dichlorodifluoromethane	2.4		2.0	ug/m3			09/22/17 01:56	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 01:56	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 01:56	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 01:56	1
cis-1,2-Dichloroethene	7.4		1.6	ug/m3			09/22/17 01:56	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 01:56	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 01:56	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 01:56	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 01:56	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 01:56	1
Ethylbenzene	2.6		1.7	ug/m3			09/22/17 01:56	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 01:56	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 01:56	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 01:56	1
Methylene Chloride	2.1		1.4	ug/m3			09/22/17 01:56	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 01:56	1
Styrene	ND		1.7	ug/m3			09/22/17 01:56	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 01:56	1
Tetrachloroethene	7.3		2.7	ug/m3			09/22/17 01:56	1
Toluene	31		1.5	ug/m3			09/22/17 01:56	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 01:56	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 01:56	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 01:56	1
Trichloroethene	4.9		2.1	ug/m3			09/22/17 01:56	1
Trichlorofluoromethane	2.2		2.2	ug/m3			09/22/17 01:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 01:56	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 01:56	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 01:56	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 01:56	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 01:56	1
m,p-Xylene	4.6		3.5	ug/m3			09/22/17 01:56	1
o-Xylene	ND		1.7	ug/m3			09/22/17 01:56	1
Naphthalene	ND		4.2	ug/m3			09/22/17 01:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130		09/22/17 01:56	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		09/22/17 01:56	1
Toluene-d8 (Surr)	100		70 - 130		09/22/17 01:56	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-15

Lab Sample ID: 320-31467-14

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	21		5.0	ppb v/v			09/22/17 02:53	1
Benzene	1.0		0.40	ppb v/v			09/22/17 02:53	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 02:53	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 02:53	1
Bromoform	ND		0.40	ppb v/v			09/22/17 02:53	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 02:53	1
2-Butanone (MEK)	1.3		0.80	ppb v/v			09/22/17 02:53	1
Carbon disulfide	1.0		0.80	ppb v/v			09/22/17 02:53	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 02:53	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 02:53	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 02:53	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 02:53	1
Chloroform	ND		0.30	ppb v/v			09/22/17 02:53	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 02:53	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 02:53	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 02:53	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 02:53	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 02:53	1
Dichlorodifluoromethane	3.4		0.40	ppb v/v			09/22/17 02:53	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 02:53	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 02:53	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 02:53	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 02:53	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 02:53	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 02:53	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 02:53	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 02:53	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 02:53	1
Ethylbenzene	0.90		0.40	ppb v/v			09/22/17 02:53	1
4-Ethyltoluene	0.45		0.40	ppb v/v			09/22/17 02:53	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 02:53	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 02:53	1
Methylene Chloride	0.40		0.40	ppb v/v			09/22/17 02:53	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 02:53	1
Styrene	ND		0.40	ppb v/v			09/22/17 02:53	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 02:53	1
Tetrachloroethene	4.8		0.40	ppb v/v			09/22/17 02:53	1
Toluene	4.5		0.40	ppb v/v			09/22/17 02:53	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 02:53	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 02:53	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 02:53	1
Trichloroethene	0.83		0.40	ppb v/v			09/22/17 02:53	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/22/17 02:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 02:53	1
1,2,4-Trimethylbenzene	1.3		0.80	ppb v/v			09/22/17 02:53	1
1,3,5-Trimethylbenzene	0.40		0.40	ppb v/v			09/22/17 02:53	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 02:53	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 02:53	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-15

Lab Sample ID: 320-31467-14

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	3.6		0.80	ppb v/v			09/22/17 02:53	1
o-Xylene	1.3		0.40	ppb v/v			09/22/17 02:53	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 02:53	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	49		12	ug/m3			09/22/17 02:53	1
Benzene	3.3		1.3	ug/m3			09/22/17 02:53	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 02:53	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 02:53	1
Bromoform	ND		4.1	ug/m3			09/22/17 02:53	1
Bromomethane	ND		3.1	ug/m3			09/22/17 02:53	1
2-Butanone (MEK)	4.0		2.4	ug/m3			09/22/17 02:53	1
Carbon disulfide	3.2		2.5	ug/m3			09/22/17 02:53	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 02:53	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 02:53	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 02:53	1
Chloroethane	ND		2.1	ug/m3			09/22/17 02:53	1
Chloroform	ND		1.5	ug/m3			09/22/17 02:53	1
Chloromethane	ND		1.7	ug/m3			09/22/17 02:53	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 02:53	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 02:53	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 02:53	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 02:53	1
Dichlorodifluoromethane	17		2.0	ug/m3			09/22/17 02:53	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 02:53	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 02:53	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 02:53	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 02:53	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 02:53	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 02:53	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 02:53	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 02:53	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 02:53	1
Ethylbenzene	3.9		1.7	ug/m3			09/22/17 02:53	1
4-Ethyltoluene	2.2		2.0	ug/m3			09/22/17 02:53	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 02:53	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 02:53	1
Methylene Chloride	1.4		1.4	ug/m3			09/22/17 02:53	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 02:53	1
Styrene	ND		1.7	ug/m3			09/22/17 02:53	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 02:53	1
Tetrachloroethene	32		2.7	ug/m3			09/22/17 02:53	1
Toluene	17		1.5	ug/m3			09/22/17 02:53	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 02:53	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 02:53	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 02:53	1
Trichloroethene	4.5		2.1	ug/m3			09/22/17 02:53	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/22/17 02:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 02:53	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-15

Lab Sample ID: 320-31467-14

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	6.4		3.9	ug/m3			09/22/17 02:53	1
1,3,5-Trimethylbenzene	2.0		2.0	ug/m3			09/22/17 02:53	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 02:53	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 02:53	1
m,p-Xylene	16		3.5	ug/m3			09/22/17 02:53	1
o-Xylene	5.7		1.7	ug/m3			09/22/17 02:53	1
Naphthalene	ND		4.2	ug/m3			09/22/17 02:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				09/22/17 02:53	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130				09/22/17 02:53	1
Toluene-d8 (Surr)	100		70 - 130				09/22/17 02:53	1

Client Sample ID: G-170907-RA-16

Lab Sample ID: 320-31467-15

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	24		5.0	ppb v/v			09/22/17 03:44	1
Benzene	1.0		0.40	ppb v/v			09/22/17 03:44	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 03:44	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 03:44	1
Bromoform	ND		0.40	ppb v/v			09/22/17 03:44	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 03:44	1
2-Butanone (MEK)	4.7		0.80	ppb v/v			09/22/17 03:44	1
Carbon disulfide	8.1		0.80	ppb v/v			09/22/17 03:44	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 03:44	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 03:44	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 03:44	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 03:44	1
Chloroform	ND		0.30	ppb v/v			09/22/17 03:44	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 03:44	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 03:44	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 03:44	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 03:44	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 03:44	1
Dichlorodifluoromethane	17		0.40	ppb v/v			09/22/17 03:44	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 03:44	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 03:44	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 03:44	1
cis-1,2-Dichloroethene	0.54		0.40	ppb v/v			09/22/17 03:44	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 03:44	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 03:44	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 03:44	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 03:44	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 03:44	1
Ethylbenzene	1.7		0.40	ppb v/v			09/22/17 03:44	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-16

Lab Sample ID: 320-31467-15

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Ethyltoluene	0.52		0.40	ppb v/v			09/22/17 03:44	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 03:44	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 03:44	1
Methylene Chloride	0.67		0.40	ppb v/v			09/22/17 03:44	1
4-Methyl-2-pentanone (MIBK)	3.2		0.40	ppb v/v			09/22/17 03:44	1
Styrene	0.70		0.40	ppb v/v			09/22/17 03:44	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 03:44	1
Tetrachloroethene	6.7		0.40	ppb v/v			09/22/17 03:44	1
Toluene	9.8		0.40	ppb v/v			09/22/17 03:44	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 03:44	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 03:44	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 03:44	1
Trichloroethene	1.3		0.40	ppb v/v			09/22/17 03:44	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/22/17 03:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 03:44	1
1,2,4-Trimethylbenzene	1.3		0.80	ppb v/v			09/22/17 03:44	1
1,3,5-Trimethylbenzene	0.44		0.40	ppb v/v			09/22/17 03:44	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 03:44	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 03:44	1
m,p-Xylene	5.5		0.80	ppb v/v			09/22/17 03:44	1
o-Xylene	2.1		0.40	ppb v/v			09/22/17 03:44	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 03:44	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	57		12	ug/m3			09/22/17 03:44	1
Benzene	3.2		1.3	ug/m3			09/22/17 03:44	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 03:44	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 03:44	1
Bromoform	ND		4.1	ug/m3			09/22/17 03:44	1
Bromomethane	ND		3.1	ug/m3			09/22/17 03:44	1
2-Butanone (MEK)	14		2.4	ug/m3			09/22/17 03:44	1
Carbon disulfide	25		2.5	ug/m3			09/22/17 03:44	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 03:44	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 03:44	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 03:44	1
Chloroethane	ND		2.1	ug/m3			09/22/17 03:44	1
Chloroform	ND		1.5	ug/m3			09/22/17 03:44	1
Chloromethane	ND		1.7	ug/m3			09/22/17 03:44	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 03:44	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 03:44	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 03:44	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 03:44	1
Dichlorodifluoromethane	83		2.0	ug/m3			09/22/17 03:44	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 03:44	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 03:44	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 03:44	1
cis-1,2-Dichloroethene	2.2		1.6	ug/m3			09/22/17 03:44	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 03:44	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 03:44	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-16

Lab Sample ID: 320-31467-15

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 03:44	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 03:44	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 03:44	1
Ethylbenzene	7.2		1.7	ug/m3			09/22/17 03:44	1
4-Ethyltoluene	2.5		2.0	ug/m3			09/22/17 03:44	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 03:44	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 03:44	1
Methylene Chloride	2.3		1.4	ug/m3			09/22/17 03:44	1
4-Methyl-2-pentanone (MIBK)	13		1.6	ug/m3			09/22/17 03:44	1
Styrene	3.0		1.7	ug/m3			09/22/17 03:44	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 03:44	1
Tetrachloroethene	45		2.7	ug/m3			09/22/17 03:44	1
Toluene	37		1.5	ug/m3			09/22/17 03:44	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 03:44	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 03:44	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 03:44	1
Trichloroethene	6.8		2.1	ug/m3			09/22/17 03:44	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/22/17 03:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 03:44	1
1,2,4-Trimethylbenzene	6.5		3.9	ug/m3			09/22/17 03:44	1
1,3,5-Trimethylbenzene	2.1		2.0	ug/m3			09/22/17 03:44	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 03:44	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 03:44	1
m,p-Xylene	24		3.5	ug/m3			09/22/17 03:44	1
o-Xylene	9.0		1.7	ug/m3			09/22/17 03:44	1
Naphthalene	ND		4.2	ug/m3			09/22/17 03:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130				09/22/17 03:44	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130				09/22/17 03:44	1
Toluene-d8 (Surr)	104		70 - 130				09/22/17 03:44	1

Client Sample ID: G-170907-RA-17

Lab Sample ID: 320-31467-16

Date Collected: 09/07/17 10:37

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	79		14	ppb v/v			09/22/17 04:41	2.77
Benzene	1.6		1.1	ppb v/v			09/22/17 04:41	2.77
Benzyl chloride	ND		2.2	ppb v/v			09/22/17 04:41	2.77
Bromodichloromethane	ND		0.83	ppb v/v			09/22/17 04:41	2.77
Bromoform	ND		1.1	ppb v/v			09/22/17 04:41	2.77
Bromomethane	ND		2.2	ppb v/v			09/22/17 04:41	2.77
2-Butanone (MEK)	5.6		2.2	ppb v/v			09/22/17 04:41	2.77
Carbon disulfide	70		2.2	ppb v/v			09/22/17 04:41	2.77
Carbon tetrachloride	ND		2.2	ppb v/v			09/22/17 04:41	2.77
Chlorobenzene	ND		0.83	ppb v/v			09/22/17 04:41	2.77

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-17

Lab Sample ID: 320-31467-16

Date Collected: 09/07/17 10:37

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		1.1	ppb v/v			09/22/17 04:41	2.77
Chloroethane	ND		2.2	ppb v/v			09/22/17 04:41	2.77
Chloroform	ND		0.83	ppb v/v			09/22/17 04:41	2.77
Chloromethane	ND		2.2	ppb v/v			09/22/17 04:41	2.77
1,2-Dibromoethane (EDB)	ND		2.2	ppb v/v			09/22/17 04:41	2.77
1,2-Dichlorobenzene	ND		1.1	ppb v/v			09/22/17 04:41	2.77
1,3-Dichlorobenzene	ND		1.1	ppb v/v			09/22/17 04:41	2.77
1,4-Dichlorobenzene	ND		1.1	ppb v/v			09/22/17 04:41	2.77
Dichlorodifluoromethane	8.6		1.1	ppb v/v			09/22/17 04:41	2.77
1,1-Dichloroethane	ND		0.83	ppb v/v			09/22/17 04:41	2.77
1,2-Dichloroethane	ND		2.2	ppb v/v			09/22/17 04:41	2.77
1,1-Dichloroethene	ND		2.2	ppb v/v			09/22/17 04:41	2.77
cis-1,2-Dichloroethene	ND		1.1	ppb v/v			09/22/17 04:41	2.77
trans-1,2-Dichloroethene	ND		1.1	ppb v/v			09/22/17 04:41	2.77
1,2-Dichloropropane	ND		1.1	ppb v/v			09/22/17 04:41	2.77
cis-1,3-Dichloropropene	ND		1.1	ppb v/v			09/22/17 04:41	2.77
trans-1,3-Dichloropropene	ND		1.1	ppb v/v			09/22/17 04:41	2.77
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		1.1	ppb v/v			09/22/17 04:41	2.77
Ethylbenzene	2.6		1.1	ppb v/v			09/22/17 04:41	2.77
4-Ethyltoluene	ND		1.1	ppb v/v			09/22/17 04:41	2.77
Hexachlorobutadiene	ND		5.5	ppb v/v			09/22/17 04:41	2.77
2-Hexanone	ND		1.1	ppb v/v			09/22/17 04:41	2.77
Methylene Chloride	2.1		1.1	ppb v/v			09/22/17 04:41	2.77
4-Methyl-2-pentanone (MIBK)	1.7		1.1	ppb v/v			09/22/17 04:41	2.77
Styrene	ND		1.1	ppb v/v			09/22/17 04:41	2.77
1,1,2,2-Tetrachloroethane	ND		1.1	ppb v/v			09/22/17 04:41	2.77
Tetrachloroethene	7.3		1.1	ppb v/v			09/22/17 04:41	2.77
Toluene	15		1.1	ppb v/v			09/22/17 04:41	2.77
1,2,4-Trichlorobenzene	ND		5.5	ppb v/v			09/22/17 04:41	2.77
1,1,1-Trichloroethane	ND		0.83	ppb v/v			09/22/17 04:41	2.77
1,1,2-Trichloroethane	ND		1.1	ppb v/v			09/22/17 04:41	2.77
Trichloroethene	2.7		1.1	ppb v/v			09/22/17 04:41	2.77
Trichlorofluoromethane	ND		1.1	ppb v/v			09/22/17 04:41	2.77
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.1	ppb v/v			09/22/17 04:41	2.77
1,2,4-Trimethylbenzene	ND		2.2	ppb v/v			09/22/17 04:41	2.77
1,3,5-Trimethylbenzene	ND		1.1	ppb v/v			09/22/17 04:41	2.77
Vinyl acetate	ND		2.2	ppb v/v			09/22/17 04:41	2.77
Vinyl chloride	ND		1.1	ppb v/v			09/22/17 04:41	2.77
m,p-Xylene	9.2		2.2	ppb v/v			09/22/17 04:41	2.77
o-Xylene	3.2		1.1	ppb v/v			09/22/17 04:41	2.77
Naphthalene	ND		2.2	ppb v/v			09/22/17 04:41	2.77
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	190		33	ug/m3			09/22/17 04:41	2.77
Benzene	5.1		3.5	ug/m3			09/22/17 04:41	2.77
Benzyl chloride	ND		11	ug/m3			09/22/17 04:41	2.77
Bromodichloromethane	ND		5.6	ug/m3			09/22/17 04:41	2.77
Bromoform	ND		11	ug/m3			09/22/17 04:41	2.77
Bromomethane	ND		8.6	ug/m3			09/22/17 04:41	2.77

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-17

Lab Sample ID: 320-31467-16

Date Collected: 09/07/17 10:37

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	16		6.5	ug/m3			09/22/17 04:41	2.77
Carbon disulfide	220		6.9	ug/m3			09/22/17 04:41	2.77
Carbon tetrachloride	ND		14	ug/m3			09/22/17 04:41	2.77
Chlorobenzene	ND		3.8	ug/m3			09/22/17 04:41	2.77
Dibromochloromethane	ND		9.4	ug/m3			09/22/17 04:41	2.77
Chloroethane	ND		5.8	ug/m3			09/22/17 04:41	2.77
Chloroform	ND		4.1	ug/m3			09/22/17 04:41	2.77
Chloromethane	ND		4.6	ug/m3			09/22/17 04:41	2.77
1,2-Dibromoethane (EDB)	ND		17	ug/m3			09/22/17 04:41	2.77
1,2-Dichlorobenzene	ND		6.7	ug/m3			09/22/17 04:41	2.77
1,3-Dichlorobenzene	ND		6.7	ug/m3			09/22/17 04:41	2.77
1,4-Dichlorobenzene	ND		6.7	ug/m3			09/22/17 04:41	2.77
Dichlorodifluoromethane	42		5.5	ug/m3			09/22/17 04:41	2.77
1,1-Dichloroethane	ND		3.4	ug/m3			09/22/17 04:41	2.77
1,2-Dichloroethane	ND		9.0	ug/m3			09/22/17 04:41	2.77
1,1-Dichloroethene	ND		8.8	ug/m3			09/22/17 04:41	2.77
cis-1,2-Dichloroethene	ND		4.4	ug/m3			09/22/17 04:41	2.77
trans-1,2-Dichloroethene	ND		4.4	ug/m3			09/22/17 04:41	2.77
1,2-Dichloropropane	ND		5.1	ug/m3			09/22/17 04:41	2.77
cis-1,3-Dichloropropene	ND		5.0	ug/m3			09/22/17 04:41	2.77
trans-1,3-Dichloropropene	ND		5.0	ug/m3			09/22/17 04:41	2.77
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		7.7	ug/m3			09/22/17 04:41	2.77
Ethylbenzene	11		4.8	ug/m3			09/22/17 04:41	2.77
4-Ethyltoluene	ND		5.4	ug/m3			09/22/17 04:41	2.77
Hexachlorobutadiene	ND		59	ug/m3			09/22/17 04:41	2.77
2-Hexanone	ND		4.5	ug/m3			09/22/17 04:41	2.77
Methylene Chloride	7.5		3.8	ug/m3			09/22/17 04:41	2.77
4-Methyl-2-pentanone (MIBK)	7.0		4.5	ug/m3			09/22/17 04:41	2.77
Styrene	ND		4.7	ug/m3			09/22/17 04:41	2.77
1,1,2,2-Tetrachloroethane	ND		7.6	ug/m3			09/22/17 04:41	2.77
Tetrachloroethene	49		7.5	ug/m3			09/22/17 04:41	2.77
Toluene	55		4.2	ug/m3			09/22/17 04:41	2.77
1,2,4-Trichlorobenzene	ND		41	ug/m3			09/22/17 04:41	2.77
1,1,1-Trichloroethane	ND		4.5	ug/m3			09/22/17 04:41	2.77
1,1,2-Trichloroethane	ND		6.0	ug/m3			09/22/17 04:41	2.77
Trichloroethene	15		6.0	ug/m3			09/22/17 04:41	2.77
Trichlorofluoromethane	ND		6.2	ug/m3			09/22/17 04:41	2.77
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		8.5	ug/m3			09/22/17 04:41	2.77
1,2,4-Trimethylbenzene	ND		11	ug/m3			09/22/17 04:41	2.77
1,3,5-Trimethylbenzene	ND		5.4	ug/m3			09/22/17 04:41	2.77
Vinyl acetate	ND		7.8	ug/m3			09/22/17 04:41	2.77
Vinyl chloride	ND		2.8	ug/m3			09/22/17 04:41	2.77
m,p-Xylene	40		9.6	ug/m3			09/22/17 04:41	2.77
o-Xylene	14		4.8	ug/m3			09/22/17 04:41	2.77
Naphthalene	ND		12	ug/m3			09/22/17 04:41	2.77

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130		09/22/17 04:41	2.77
1,2-Dichloroethane-d4 (Surr)	98		70 - 130		09/22/17 04:41	2.77

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-17

Lab Sample ID: 320-31467-16

Date Collected: 09/07/17 10:37

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		09/22/17 04:41	2.77

Client Sample ID: G-170907-RA-18

Lab Sample ID: 320-31467-17

Date Collected: 09/07/17 10:37

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25		5.0	ppb v/v			09/22/17 05:39	1
Benzene	ND		0.40	ppb v/v			09/22/17 05:39	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 05:39	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 05:39	1
Bromoform	ND		0.40	ppb v/v			09/22/17 05:39	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 05:39	1
2-Butanone (MEK)	7.2		0.80	ppb v/v			09/22/17 05:39	1
Carbon disulfide	4.0		0.80	ppb v/v			09/22/17 05:39	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 05:39	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 05:39	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 05:39	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 05:39	1
Chloroform	ND		0.30	ppb v/v			09/22/17 05:39	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 05:39	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 05:39	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 05:39	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 05:39	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 05:39	1
Dichlorodifluoromethane	1.5		0.40	ppb v/v			09/22/17 05:39	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 05:39	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 05:39	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 05:39	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 05:39	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 05:39	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 05:39	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 05:39	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 05:39	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 05:39	1
Ethylbenzene	1.8		0.40	ppb v/v			09/22/17 05:39	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 05:39	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 05:39	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 05:39	1
Methylene Chloride	0.91		0.40	ppb v/v			09/22/17 05:39	1
4-Methyl-2-pentanone (MIBK)	0.55		0.40	ppb v/v			09/22/17 05:39	1
Styrene	ND		0.40	ppb v/v			09/22/17 05:39	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 05:39	1
Tetrachloroethene	4.5		0.40	ppb v/v			09/22/17 05:39	1
Toluene	3.7		0.40	ppb v/v			09/22/17 05:39	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 05:39	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-18

Lab Sample ID: 320-31467-17

Date Collected: 09/07/17 10:37

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 05:39	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 05:39	1
Trichloroethene	0.56		0.40	ppb v/v			09/22/17 05:39	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/22/17 05:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 05:39	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 05:39	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 05:39	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 05:39	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 05:39	1
m,p-Xylene	7.0		0.80	ppb v/v			09/22/17 05:39	1
o-Xylene	3.0		0.40	ppb v/v			09/22/17 05:39	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 05:39	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	59		12	ug/m3			09/22/17 05:39	1
Benzene	ND		1.3	ug/m3			09/22/17 05:39	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 05:39	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 05:39	1
Bromoform	ND		4.1	ug/m3			09/22/17 05:39	1
Bromomethane	ND		3.1	ug/m3			09/22/17 05:39	1
2-Butanone (MEK)	21		2.4	ug/m3			09/22/17 05:39	1
Carbon disulfide	13		2.5	ug/m3			09/22/17 05:39	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 05:39	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 05:39	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 05:39	1
Chloroethane	ND		2.1	ug/m3			09/22/17 05:39	1
Chloroform	ND		1.5	ug/m3			09/22/17 05:39	1
Chloromethane	ND		1.7	ug/m3			09/22/17 05:39	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 05:39	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 05:39	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 05:39	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 05:39	1
Dichlorodifluoromethane	7.4		2.0	ug/m3			09/22/17 05:39	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 05:39	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 05:39	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 05:39	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 05:39	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 05:39	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 05:39	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 05:39	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 05:39	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 05:39	1
Ethylbenzene	7.8		1.7	ug/m3			09/22/17 05:39	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 05:39	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 05:39	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 05:39	1
Methylene Chloride	3.2		1.4	ug/m3			09/22/17 05:39	1
4-Methyl-2-pentanone (MIBK)	2.3		1.6	ug/m3			09/22/17 05:39	1
Styrene	ND		1.7	ug/m3			09/22/17 05:39	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-18

Lab Sample ID: 320-31467-17

Date Collected: 09/07/17 10:37

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 05:39	1
Tetrachloroethene	31		2.7	ug/m3			09/22/17 05:39	1
Toluene	14		1.5	ug/m3			09/22/17 05:39	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 05:39	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 05:39	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 05:39	1
Trichloroethene	3.0		2.1	ug/m3			09/22/17 05:39	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/22/17 05:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 05:39	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 05:39	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 05:39	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 05:39	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 05:39	1
m,p-Xylene	30		3.5	ug/m3			09/22/17 05:39	1
o-Xylene	13		1.7	ug/m3			09/22/17 05:39	1
Naphthalene	ND		4.2	ug/m3			09/22/17 05:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130		09/22/17 05:39	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 130		09/22/17 05:39	1
Toluene-d8 (Surr)	100		70 - 130		09/22/17 05:39	1

Client Sample ID: G-170907-RA-19

Lab Sample ID: 320-31467-18

Date Collected: 09/07/17 10:55

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	19		5.0	ppb v/v			09/22/17 06:32	1
Benzene	0.40		0.40	ppb v/v			09/22/17 06:32	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 06:32	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 06:32	1
Bromoform	ND		0.40	ppb v/v			09/22/17 06:32	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 06:32	1
2-Butanone (MEK)	2.2		0.80	ppb v/v			09/22/17 06:32	1
Carbon disulfide	6.4		0.80	ppb v/v			09/22/17 06:32	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 06:32	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 06:32	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 06:32	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 06:32	1
Chloroform	ND		0.30	ppb v/v			09/22/17 06:32	1
Chloromethane	1.5		0.80	ppb v/v			09/22/17 06:32	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 06:32	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 06:32	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 06:32	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 06:32	1
Dichlorodifluoromethane	0.68		0.40	ppb v/v			09/22/17 06:32	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 06:32	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-19

Lab Sample ID: 320-31467-18

Date Collected: 09/07/17 10:55

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 06:32	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 06:32	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 06:32	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 06:32	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 06:32	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 06:32	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 06:32	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 06:32	1
Ethylbenzene	3.6		0.40	ppb v/v			09/22/17 06:32	1
4-Ethyltoluene	0.43		0.40	ppb v/v			09/22/17 06:32	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 06:32	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 06:32	1
Methylene Chloride	ND		0.40	ppb v/v			09/22/17 06:32	1
4-Methyl-2-pentanone (MIBK)	1.5		0.40	ppb v/v			09/22/17 06:32	1
Styrene	0.45		0.40	ppb v/v			09/22/17 06:32	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 06:32	1
Tetrachloroethene	5.5		0.40	ppb v/v			09/22/17 06:32	1
Toluene	3.3		0.40	ppb v/v			09/22/17 06:32	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 06:32	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 06:32	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 06:32	1
Trichloroethene	ND		0.40	ppb v/v			09/22/17 06:32	1
Trichlorofluoromethane	0.47		0.40	ppb v/v			09/22/17 06:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 06:32	1
1,2,4-Trimethylbenzene	2.3		0.80	ppb v/v			09/22/17 06:32	1
1,3,5-Trimethylbenzene	0.94		0.40	ppb v/v			09/22/17 06:32	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 06:32	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 06:32	1
m,p-Xylene	16		0.80	ppb v/v			09/22/17 06:32	1
o-Xylene	7.5		0.40	ppb v/v			09/22/17 06:32	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 06:32	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	45		12	ug/m3			09/22/17 06:32	1
Benzene	1.3		1.3	ug/m3			09/22/17 06:32	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 06:32	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 06:32	1
Bromoform	ND		4.1	ug/m3			09/22/17 06:32	1
Bromomethane	ND		3.1	ug/m3			09/22/17 06:32	1
2-Butanone (MEK)	6.6		2.4	ug/m3			09/22/17 06:32	1
Carbon disulfide	20		2.5	ug/m3			09/22/17 06:32	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 06:32	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 06:32	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 06:32	1
Chloroethane	ND		2.1	ug/m3			09/22/17 06:32	1
Chloroform	ND		1.5	ug/m3			09/22/17 06:32	1
Chloromethane	3.1		1.7	ug/m3			09/22/17 06:32	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 06:32	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 06:32	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-19

Lab Sample ID: 320-31467-18

Date Collected: 09/07/17 10:55

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 06:32	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 06:32	1
Dichlorodifluoromethane	3.4		2.0	ug/m3			09/22/17 06:32	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 06:32	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 06:32	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 06:32	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 06:32	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 06:32	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 06:32	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 06:32	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 06:32	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 06:32	1
Ethylbenzene	16		1.7	ug/m3			09/22/17 06:32	1
4-Ethyltoluene	2.1		2.0	ug/m3			09/22/17 06:32	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 06:32	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 06:32	1
Methylene Chloride	ND		1.4	ug/m3			09/22/17 06:32	1
4-Methyl-2-pentanone (MIBK)	6.0		1.6	ug/m3			09/22/17 06:32	1
Styrene	1.9		1.7	ug/m3			09/22/17 06:32	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 06:32	1
Tetrachloroethene	37		2.7	ug/m3			09/22/17 06:32	1
Toluene	12		1.5	ug/m3			09/22/17 06:32	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 06:32	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 06:32	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 06:32	1
Trichloroethene	ND		2.1	ug/m3			09/22/17 06:32	1
Trichlorofluoromethane	2.6		2.2	ug/m3			09/22/17 06:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 06:32	1
1,2,4-Trimethylbenzene	11		3.9	ug/m3			09/22/17 06:32	1
1,3,5-Trimethylbenzene	4.6		2.0	ug/m3			09/22/17 06:32	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 06:32	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 06:32	1
m,p-Xylene	70		3.5	ug/m3			09/22/17 06:32	1
o-Xylene	33		1.7	ug/m3			09/22/17 06:32	1
Naphthalene	ND		4.2	ug/m3			09/22/17 06:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130				09/22/17 06:32	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130				09/22/17 06:32	1
Toluene-d8 (Surr)	101		70 - 130				09/22/17 06:32	1

Client Sample ID: G-170907-RA-20

Lab Sample ID: 320-31467-19

Date Collected: 09/07/17 10:56

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	16		5.0	ppb v/v			09/22/17 07:25	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-20

Lab Sample ID: 320-31467-19

Date Collected: 09/07/17 10:56

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	ppb v/v			09/22/17 07:25	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 07:25	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 07:25	1
Bromoform	ND		0.40	ppb v/v			09/22/17 07:25	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 07:25	1
2-Butanone (MEK)	2.3		0.80	ppb v/v			09/22/17 07:25	1
Carbon disulfide	19		0.80	ppb v/v			09/22/17 07:25	1
Carbon tetrachloride	1.7		0.80	ppb v/v			09/22/17 07:25	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 07:25	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 07:25	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 07:25	1
Chloroform	7.4		0.30	ppb v/v			09/22/17 07:25	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 07:25	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 07:25	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 07:25	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 07:25	1
1,4-Dichlorobenzene	0.40		0.40	ppb v/v			09/22/17 07:25	1
Dichlorodifluoromethane	39		0.40	ppb v/v			09/22/17 07:25	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 07:25	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 07:25	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 07:25	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 07:25	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 07:25	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 07:25	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 07:25	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 07:25	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 07:25	1
Ethylbenzene	3.6		0.40	ppb v/v			09/22/17 07:25	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 07:25	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 07:25	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 07:25	1
Methylene Chloride	ND		0.40	ppb v/v			09/22/17 07:25	1
4-Methyl-2-pentanone (MIBK)	2.4		0.40	ppb v/v			09/22/17 07:25	1
Styrene	ND		0.40	ppb v/v			09/22/17 07:25	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 07:25	1
Tetrachloroethene	7.7		0.40	ppb v/v			09/22/17 07:25	1
Toluene	3.6		0.40	ppb v/v			09/22/17 07:25	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 07:25	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 07:25	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 07:25	1
Trichloroethene	0.43		0.40	ppb v/v			09/22/17 07:25	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/22/17 07:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 07:25	1
1,2,4-Trimethylbenzene	1.0		0.80	ppb v/v			09/22/17 07:25	1
1,3,5-Trimethylbenzene	0.53		0.40	ppb v/v			09/22/17 07:25	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 07:25	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 07:25	1
m,p-Xylene	15		0.80	ppb v/v			09/22/17 07:25	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-20

Lab Sample ID: 320-31467-19

Date Collected: 09/07/17 10:56

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	6.7		0.40	ppb v/v			09/22/17 07:25	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 07:25	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	39		12	ug/m3			09/22/17 07:25	1
Benzene	ND		1.3	ug/m3			09/22/17 07:25	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 07:25	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 07:25	1
Bromoform	ND		4.1	ug/m3			09/22/17 07:25	1
Bromomethane	ND		3.1	ug/m3			09/22/17 07:25	1
2-Butanone (MEK)	6.8		2.4	ug/m3			09/22/17 07:25	1
Carbon disulfide	59		2.5	ug/m3			09/22/17 07:25	1
Carbon tetrachloride	10		5.0	ug/m3			09/22/17 07:25	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 07:25	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 07:25	1
Chloroethane	ND		2.1	ug/m3			09/22/17 07:25	1
Chloroform	36		1.5	ug/m3			09/22/17 07:25	1
Chloromethane	ND		1.7	ug/m3			09/22/17 07:25	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 07:25	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 07:25	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 07:25	1
1,4-Dichlorobenzene	2.4		2.4	ug/m3			09/22/17 07:25	1
Dichlorodifluoromethane	190		2.0	ug/m3			09/22/17 07:25	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 07:25	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 07:25	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 07:25	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 07:25	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 07:25	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 07:25	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 07:25	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 07:25	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 07:25	1
Ethylbenzene	16		1.7	ug/m3			09/22/17 07:25	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 07:25	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 07:25	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 07:25	1
Methylene Chloride	ND		1.4	ug/m3			09/22/17 07:25	1
4-Methyl-2-pentanone (MIBK)	9.7		1.6	ug/m3			09/22/17 07:25	1
Styrene	ND		1.7	ug/m3			09/22/17 07:25	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 07:25	1
Tetrachloroethene	52		2.7	ug/m3			09/22/17 07:25	1
Toluene	14		1.5	ug/m3			09/22/17 07:25	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 07:25	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 07:25	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 07:25	1
Trichloroethene	2.3		2.1	ug/m3			09/22/17 07:25	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/22/17 07:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 07:25	1
1,2,4-Trimethylbenzene	4.9		3.9	ug/m3			09/22/17 07:25	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-20

Lab Sample ID: 320-31467-19

Date Collected: 09/07/17 10:56

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	2.6		2.0	ug/m3			09/22/17 07:25	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 07:25	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 07:25	1
m,p-Xylene	65		3.5	ug/m3			09/22/17 07:25	1
o-Xylene	29		1.7	ug/m3			09/22/17 07:25	1
Naphthalene	ND		4.2	ug/m3			09/22/17 07:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130				09/22/17 07:25	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130				09/22/17 07:25	1
Toluene-d8 (Surr)	99		70 - 130				09/22/17 07:25	1

Client Sample ID: G-170906-RA-01

Lab Sample ID: 320-31467-20

Date Collected: 09/06/17 12:43

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	32		5.0	ppb v/v			09/22/17 15:31	1
Benzene	1.5		0.40	ppb v/v			09/22/17 15:31	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 15:31	1
Bromodichloromethane	0.69		0.30	ppb v/v			09/22/17 15:31	1
Bromoform	0.69		0.40	ppb v/v			09/22/17 15:31	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 15:31	1
2-Butanone (MEK)	3.5		0.80	ppb v/v			09/22/17 15:31	1
Carbon disulfide	5.3		0.80	ppb v/v			09/22/17 15:31	1
Carbon tetrachloride	0.82		0.80	ppb v/v			09/22/17 15:31	1
Chlorobenzene	1.0		0.30	ppb v/v			09/22/17 15:31	1
Dibromochloromethane	0.67		0.40	ppb v/v			09/22/17 15:31	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 15:31	1
Chloroform	0.75		0.30	ppb v/v			09/22/17 15:31	1
Chloromethane	1.1		0.80	ppb v/v			09/22/17 15:31	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 15:31	1
1,2-Dichlorobenzene	2.5		0.40	ppb v/v			09/22/17 15:31	1
1,3-Dichlorobenzene	0.78		0.40	ppb v/v			09/22/17 15:31	1
1,4-Dichlorobenzene	3.0		0.40	ppb v/v			09/22/17 15:31	1
Dichlorodifluoromethane	1.4		0.40	ppb v/v			09/22/17 15:31	1
1,1-Dichloroethane	0.68		0.30	ppb v/v			09/22/17 15:31	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 15:31	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 15:31	1
cis-1,2-Dichloroethene	0.84		0.40	ppb v/v			09/22/17 15:31	1
trans-1,2-Dichloroethene	0.75		0.40	ppb v/v			09/22/17 15:31	1
1,2-Dichloropropane	0.70		0.40	ppb v/v			09/22/17 15:31	1
cis-1,3-Dichloropropene	0.70		0.40	ppb v/v			09/22/17 15:31	1
trans-1,3-Dichloropropene	0.69		0.40	ppb v/v			09/22/17 15:31	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.79		0.40	ppb v/v			09/22/17 15:31	1
Ethylbenzene	1.8		0.40	ppb v/v			09/22/17 15:31	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-01

Lab Sample ID: 320-31467-20

Date Collected: 09/06/17 12:43

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Ethyltoluene	1.1		0.40	ppb v/v			09/22/17 15:31	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 15:31	1
2-Hexanone	0.89		0.40	ppb v/v			09/22/17 15:31	1
Methylene Chloride	1.9		0.40	ppb v/v			09/22/17 15:31	1
4-Methyl-2-pentanone (MIBK)	1.1		0.40	ppb v/v			09/22/17 15:31	1
Styrene	0.84		0.40	ppb v/v			09/22/17 15:31	1
1,1,2,2-Tetrachloroethane	0.69		0.40	ppb v/v			09/22/17 15:31	1
Tetrachloroethene	4.6		0.40	ppb v/v			09/22/17 15:31	1
Toluene	7.7		0.40	ppb v/v			09/22/17 15:31	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 15:31	1
1,1,1-Trichloroethane	0.71		0.30	ppb v/v			09/22/17 15:31	1
1,1,2-Trichloroethane	0.67		0.40	ppb v/v			09/22/17 15:31	1
Trichloroethene	1.7		0.40	ppb v/v			09/22/17 15:31	1
Trichlorofluoromethane	1.6		0.40	ppb v/v			09/22/17 15:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.79		0.40	ppb v/v			09/22/17 15:31	1
1,2,4-Trimethylbenzene	2.2		0.80	ppb v/v			09/22/17 15:31	1
1,3,5-Trimethylbenzene	1.1		0.40	ppb v/v			09/22/17 15:31	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 15:31	1
Vinyl chloride	0.66		0.40	ppb v/v			09/22/17 15:31	1
m,p-Xylene	5.2		0.80	ppb v/v			09/22/17 15:31	1
o-Xylene	2.2		0.40	ppb v/v			09/22/17 15:31	1
Naphthalene	0.99		0.80	ppb v/v			09/22/17 15:31	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	77		12	ug/m3			09/22/17 15:31	1
Benzene	4.7		1.3	ug/m3			09/22/17 15:31	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 15:31	1
Bromodichloromethane	4.6		2.0	ug/m3			09/22/17 15:31	1
Bromoform	7.2		4.1	ug/m3			09/22/17 15:31	1
Bromomethane	ND		3.1	ug/m3			09/22/17 15:31	1
2-Butanone (MEK)	10		2.4	ug/m3			09/22/17 15:31	1
Carbon disulfide	16		2.5	ug/m3			09/22/17 15:31	1
Carbon tetrachloride	5.1		5.0	ug/m3			09/22/17 15:31	1
Chlorobenzene	4.8		1.4	ug/m3			09/22/17 15:31	1
Dibromochloromethane	5.7		3.4	ug/m3			09/22/17 15:31	1
Chloroethane	ND		2.1	ug/m3			09/22/17 15:31	1
Chloroform	3.7		1.5	ug/m3			09/22/17 15:31	1
Chloromethane	2.2		1.7	ug/m3			09/22/17 15:31	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 15:31	1
1,2-Dichlorobenzene	15		2.4	ug/m3			09/22/17 15:31	1
1,3-Dichlorobenzene	4.7		2.4	ug/m3			09/22/17 15:31	1
1,4-Dichlorobenzene	18		2.4	ug/m3			09/22/17 15:31	1
Dichlorodifluoromethane	6.8		2.0	ug/m3			09/22/17 15:31	1
1,1-Dichloroethane	2.7		1.2	ug/m3			09/22/17 15:31	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 15:31	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 15:31	1
cis-1,2-Dichloroethene	3.3		1.6	ug/m3			09/22/17 15:31	1
trans-1,2-Dichloroethene	3.0		1.6	ug/m3			09/22/17 15:31	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-01

Lab Sample ID: 320-31467-20

Date Collected: 09/06/17 12:43

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	3.2		1.8	ug/m3			09/22/17 15:31	1
cis-1,3-Dichloropropene	3.2		1.8	ug/m3			09/22/17 15:31	1
trans-1,3-Dichloropropene	3.1		1.8	ug/m3			09/22/17 15:31	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	5.5		2.8	ug/m3			09/22/17 15:31	1
Ethylbenzene	7.7		1.7	ug/m3			09/22/17 15:31	1
4-Ethyltoluene	5.4		2.0	ug/m3			09/22/17 15:31	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 15:31	1
2-Hexanone	3.6		1.6	ug/m3			09/22/17 15:31	1
Methylene Chloride	6.6		1.4	ug/m3			09/22/17 15:31	1
4-Methyl-2-pentanone (MIBK)	4.6		1.6	ug/m3			09/22/17 15:31	1
Styrene	3.6		1.7	ug/m3			09/22/17 15:31	1
1,1,2,2-Tetrachloroethane	4.8		2.7	ug/m3			09/22/17 15:31	1
Tetrachloroethene	31		2.7	ug/m3			09/22/17 15:31	1
Toluene	29		1.5	ug/m3			09/22/17 15:31	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 15:31	1
1,1,1-Trichloroethane	3.9		1.6	ug/m3			09/22/17 15:31	1
1,1,2-Trichloroethane	3.7		2.2	ug/m3			09/22/17 15:31	1
Trichloroethene	9.3		2.1	ug/m3			09/22/17 15:31	1
Trichlorofluoromethane	9.0		2.2	ug/m3			09/22/17 15:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	6.1		3.1	ug/m3			09/22/17 15:31	1
1,2,4-Trimethylbenzene	11		3.9	ug/m3			09/22/17 15:31	1
1,3,5-Trimethylbenzene	5.5		2.0	ug/m3			09/22/17 15:31	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 15:31	1
Vinyl chloride	1.7		1.0	ug/m3			09/22/17 15:31	1
m,p-Xylene	23		3.5	ug/m3			09/22/17 15:31	1
o-Xylene	9.4		1.7	ug/m3			09/22/17 15:31	1
Naphthalene	5.2		4.2	ug/m3			09/22/17 15:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130				09/22/17 15:31	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130				09/22/17 15:31	1
Toluene-d8 (Surr)	101		70 - 130				09/22/17 15:31	1

Client Sample ID: G-170906-RA-02

Lab Sample ID: 320-31467-21

Date Collected: 09/06/17 13:06

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	ppb v/v			09/25/17 18:19	1
Benzene	ND		0.40	ppb v/v			09/25/17 18:19	1
Benzyl chloride	ND		0.80	ppb v/v			09/25/17 18:19	1
Bromodichloromethane	ND		0.30	ppb v/v			09/25/17 18:19	1
Bromoform	ND		0.40	ppb v/v			09/25/17 18:19	1
Bromomethane	ND		0.80	ppb v/v			09/25/17 18:19	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/25/17 18:19	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-02

Lab Sample ID: 320-31467-21

Date Collected: 09/06/17 13:06

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	0.89		0.80	ppb v/v			09/25/17 18:19	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/25/17 18:19	1
Chlorobenzene	ND		0.30	ppb v/v			09/25/17 18:19	1
Dibromochloromethane	ND		0.40	ppb v/v			09/25/17 18:19	1
Chloroethane	ND		0.80	ppb v/v			09/25/17 18:19	1
Chloroform	ND		0.30	ppb v/v			09/25/17 18:19	1
Chloromethane	ND		0.80	ppb v/v			09/25/17 18:19	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/25/17 18:19	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/25/17 18:19	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/25/17 18:19	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/25/17 18:19	1
Dichlorodifluoromethane	ND		0.40	ppb v/v			09/25/17 18:19	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/25/17 18:19	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/25/17 18:19	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/25/17 18:19	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/25/17 18:19	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/25/17 18:19	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/25/17 18:19	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/25/17 18:19	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/25/17 18:19	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/25/17 18:19	1
Ethylbenzene	ND		0.40	ppb v/v			09/25/17 18:19	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/25/17 18:19	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/25/17 18:19	1
2-Hexanone	ND		0.40	ppb v/v			09/25/17 18:19	1
Methylene Chloride	0.69		0.40	ppb v/v			09/25/17 18:19	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/25/17 18:19	1
Styrene	ND		0.40	ppb v/v			09/25/17 18:19	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/25/17 18:19	1
Tetrachloroethene	ND		0.40	ppb v/v			09/25/17 18:19	1
Toluene	ND		0.40	ppb v/v			09/25/17 18:19	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/25/17 18:19	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/25/17 18:19	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/25/17 18:19	1
Trichloroethene	ND		0.40	ppb v/v			09/25/17 18:19	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/25/17 18:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/25/17 18:19	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/25/17 18:19	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/25/17 18:19	1
Vinyl acetate	ND		0.80	ppb v/v			09/25/17 18:19	1
Vinyl chloride	ND		0.40	ppb v/v			09/25/17 18:19	1
m,p-Xylene	ND		0.80	ppb v/v			09/25/17 18:19	1
o-Xylene	ND		0.40	ppb v/v			09/25/17 18:19	1
Naphthalene	ND		0.80	ppb v/v			09/25/17 18:19	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		12	ug/m3			09/25/17 18:19	1
Benzene	ND		1.3	ug/m3			09/25/17 18:19	1
Benzyl chloride	ND		4.1	ug/m3			09/25/17 18:19	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-02

Lab Sample ID: 320-31467-21

Date Collected: 09/06/17 13:06

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		2.0	ug/m3			09/25/17 18:19	1
Bromoform	ND		4.1	ug/m3			09/25/17 18:19	1
Bromomethane	ND		3.1	ug/m3			09/25/17 18:19	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/25/17 18:19	1
Carbon disulfide	2.8		2.5	ug/m3			09/25/17 18:19	1
Carbon tetrachloride	ND		5.0	ug/m3			09/25/17 18:19	1
Chlorobenzene	ND		1.4	ug/m3			09/25/17 18:19	1
Dibromochloromethane	ND		3.4	ug/m3			09/25/17 18:19	1
Chloroethane	ND		2.1	ug/m3			09/25/17 18:19	1
Chloroform	ND		1.5	ug/m3			09/25/17 18:19	1
Chloromethane	ND		1.7	ug/m3			09/25/17 18:19	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/25/17 18:19	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/25/17 18:19	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/25/17 18:19	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/25/17 18:19	1
Dichlorodifluoromethane	ND		2.0	ug/m3			09/25/17 18:19	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/25/17 18:19	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/25/17 18:19	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/25/17 18:19	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/25/17 18:19	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/25/17 18:19	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/25/17 18:19	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/25/17 18:19	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/25/17 18:19	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/25/17 18:19	1
Ethylbenzene	ND		1.7	ug/m3			09/25/17 18:19	1
4-Ethyltoluene	ND		2.0	ug/m3			09/25/17 18:19	1
Hexachlorobutadiene	ND		21	ug/m3			09/25/17 18:19	1
2-Hexanone	ND		1.6	ug/m3			09/25/17 18:19	1
Methylene Chloride	2.4		1.4	ug/m3			09/25/17 18:19	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/25/17 18:19	1
Styrene	ND		1.7	ug/m3			09/25/17 18:19	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/25/17 18:19	1
Tetrachloroethene	ND		2.7	ug/m3			09/25/17 18:19	1
Toluene	ND		1.5	ug/m3			09/25/17 18:19	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/25/17 18:19	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/25/17 18:19	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/25/17 18:19	1
Trichloroethene	ND		2.1	ug/m3			09/25/17 18:19	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/25/17 18:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/25/17 18:19	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/25/17 18:19	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/25/17 18:19	1
Vinyl acetate	ND		2.8	ug/m3			09/25/17 18:19	1
Vinyl chloride	ND		1.0	ug/m3			09/25/17 18:19	1
m,p-Xylene	ND		3.5	ug/m3			09/25/17 18:19	1
o-Xylene	ND		1.7	ug/m3			09/25/17 18:19	1
Naphthalene	ND		4.2	ug/m3			09/25/17 18:19	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-02

Lab Sample ID: 320-31467-21

Date Collected: 09/06/17 13:06

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	111		70 - 130		09/25/17 18:19	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130		09/25/17 18:19	1
Toluene-d8 (Surr)	122		70 - 130		09/25/17 18:19	1

Client Sample ID: G-170906-RA-03

Lab Sample ID: 320-31467-22

Date Collected: 09/06/17 13:29

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	19		5.0	ppb v/v			09/22/17 17:18	1
Benzene	0.42		0.40	ppb v/v			09/22/17 17:18	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 17:18	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 17:18	1
Bromoform	ND		0.40	ppb v/v			09/22/17 17:18	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 17:18	1
2-Butanone (MEK)	3.3		0.80	ppb v/v			09/22/17 17:18	1
Carbon disulfide	5.0		0.80	ppb v/v			09/22/17 17:18	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 17:18	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 17:18	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 17:18	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 17:18	1
Chloroform	ND		0.30	ppb v/v			09/22/17 17:18	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 17:18	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 17:18	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 17:18	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 17:18	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 17:18	1
Dichlorodifluoromethane	0.71		0.40	ppb v/v			09/22/17 17:18	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 17:18	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 17:18	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 17:18	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 17:18	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 17:18	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 17:18	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 17:18	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 17:18	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 17:18	1
Ethylbenzene	0.99		0.40	ppb v/v			09/22/17 17:18	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 17:18	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 17:18	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 17:18	1
Methylene Chloride	0.69		0.40	ppb v/v			09/22/17 17:18	1
4-Methyl-2-pentanone (MIBK)	3.2		0.40	ppb v/v			09/22/17 17:18	1
Styrene	ND		0.40	ppb v/v			09/22/17 17:18	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 17:18	1
Tetrachloroethene	7.2		0.40	ppb v/v			09/22/17 17:18	1
Toluene	5.3		0.40	ppb v/v			09/22/17 17:18	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-03

Lab Sample ID: 320-31467-22

Date Collected: 09/06/17 13:29

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 17:18	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 17:18	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 17:18	1
Trichloroethene	1.9		0.40	ppb v/v			09/22/17 17:18	1
Trichlorofluoromethane	0.52		0.40	ppb v/v			09/22/17 17:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 17:18	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 17:18	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 17:18	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 17:18	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 17:18	1
m,p-Xylene	2.8		0.80	ppb v/v			09/22/17 17:18	1
o-Xylene	0.93		0.40	ppb v/v			09/22/17 17:18	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 17:18	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	45		12	ug/m3			09/22/17 17:18	1
Benzene	1.3		1.3	ug/m3			09/22/17 17:18	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 17:18	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 17:18	1
Bromoform	ND		4.1	ug/m3			09/22/17 17:18	1
Bromomethane	ND		3.1	ug/m3			09/22/17 17:18	1
2-Butanone (MEK)	9.6		2.4	ug/m3			09/22/17 17:18	1
Carbon disulfide	16		2.5	ug/m3			09/22/17 17:18	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 17:18	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 17:18	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 17:18	1
Chloroethane	ND		2.1	ug/m3			09/22/17 17:18	1
Chloroform	ND		1.5	ug/m3			09/22/17 17:18	1
Chloromethane	ND		1.7	ug/m3			09/22/17 17:18	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 17:18	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 17:18	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 17:18	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 17:18	1
Dichlorodifluoromethane	3.5		2.0	ug/m3			09/22/17 17:18	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 17:18	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 17:18	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 17:18	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 17:18	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 17:18	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 17:18	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 17:18	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 17:18	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 17:18	1
Ethylbenzene	4.3		1.7	ug/m3			09/22/17 17:18	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 17:18	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 17:18	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 17:18	1
Methylene Chloride	2.4		1.4	ug/m3			09/22/17 17:18	1
4-Methyl-2-pentanone (MIBK)	13		1.6	ug/m3			09/22/17 17:18	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-03

Lab Sample ID: 320-31467-22

Date Collected: 09/06/17 13:29

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1.7	ug/m3			09/22/17 17:18	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 17:18	1
Tetrachloroethene	49		2.7	ug/m3			09/22/17 17:18	1
Toluene	20		1.5	ug/m3			09/22/17 17:18	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 17:18	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 17:18	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 17:18	1
Trichloroethene	10		2.1	ug/m3			09/22/17 17:18	1
Trichlorofluoromethane	2.9		2.2	ug/m3			09/22/17 17:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 17:18	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 17:18	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 17:18	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 17:18	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 17:18	1
m,p-Xylene	12		3.5	ug/m3			09/22/17 17:18	1
o-Xylene	4.0		1.7	ug/m3			09/22/17 17:18	1
Naphthalene	ND		4.2	ug/m3			09/22/17 17:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130				09/22/17 17:18	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130				09/22/17 17:18	1
Toluene-d8 (Surr)	98		70 - 130				09/22/17 17:18	1

Client Sample ID: G-170906-RA-04

Lab Sample ID: 320-31467-23

Date Collected: 09/06/17 14:34

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	17		5.0	ppb v/v			09/22/17 18:11	1
Benzene	0.43		0.40	ppb v/v			09/22/17 18:11	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 18:11	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 18:11	1
Bromoform	ND		0.40	ppb v/v			09/22/17 18:11	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 18:11	1
2-Butanone (MEK)	2.6		0.80	ppb v/v			09/22/17 18:11	1
Carbon disulfide	2.8		0.80	ppb v/v			09/22/17 18:11	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 18:11	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 18:11	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 18:11	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 18:11	1
Chloroform	1.7		0.30	ppb v/v			09/22/17 18:11	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 18:11	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 18:11	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 18:11	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 18:11	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 18:11	1
Dichlorodifluoromethane	0.65		0.40	ppb v/v			09/22/17 18:11	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-04

Lab Sample ID: 320-31467-23

Date Collected: 09/06/17 14:34

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 18:11	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 18:11	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 18:11	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 18:11	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 18:11	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 18:11	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 18:11	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 18:11	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 18:11	1
Ethylbenzene	ND		0.40	ppb v/v			09/22/17 18:11	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 18:11	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 18:11	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 18:11	1
Methylene Chloride	1.1		0.40	ppb v/v			09/22/17 18:11	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 18:11	1
Styrene	ND		0.40	ppb v/v			09/22/17 18:11	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 18:11	1
Tetrachloroethene	12		0.40	ppb v/v			09/22/17 18:11	1
Toluene	4.2		0.40	ppb v/v			09/22/17 18:11	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 18:11	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 18:11	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 18:11	1
Trichloroethene	3.3		0.40	ppb v/v			09/22/17 18:11	1
Trichlorofluoromethane	0.47		0.40	ppb v/v			09/22/17 18:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 18:11	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 18:11	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 18:11	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 18:11	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 18:11	1
m,p-Xylene	ND		0.80	ppb v/v			09/22/17 18:11	1
o-Xylene	ND		0.40	ppb v/v			09/22/17 18:11	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 18:11	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	40		12	ug/m3			09/22/17 18:11	1
Benzene	1.4		1.3	ug/m3			09/22/17 18:11	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 18:11	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 18:11	1
Bromoform	ND		4.1	ug/m3			09/22/17 18:11	1
Bromomethane	ND		3.1	ug/m3			09/22/17 18:11	1
2-Butanone (MEK)	7.7		2.4	ug/m3			09/22/17 18:11	1
Carbon disulfide	8.6		2.5	ug/m3			09/22/17 18:11	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 18:11	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 18:11	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 18:11	1
Chloroethane	ND		2.1	ug/m3			09/22/17 18:11	1
Chloroform	8.3		1.5	ug/m3			09/22/17 18:11	1
Chloromethane	ND		1.7	ug/m3			09/22/17 18:11	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 18:11	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-04

Lab Sample ID: 320-31467-23

Date Collected: 09/06/17 14:34

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 18:11	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 18:11	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 18:11	1
Dichlorodifluoromethane	3.2		2.0	ug/m3			09/22/17 18:11	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 18:11	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 18:11	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 18:11	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 18:11	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 18:11	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 18:11	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 18:11	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 18:11	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 18:11	1
Ethylbenzene	ND		1.7	ug/m3			09/22/17 18:11	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 18:11	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 18:11	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 18:11	1
Methylene Chloride	3.8		1.4	ug/m3			09/22/17 18:11	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 18:11	1
Styrene	ND		1.7	ug/m3			09/22/17 18:11	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 18:11	1
Tetrachloroethene	81		2.7	ug/m3			09/22/17 18:11	1
Toluene	16		1.5	ug/m3			09/22/17 18:11	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 18:11	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 18:11	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 18:11	1
Trichloroethene	18		2.1	ug/m3			09/22/17 18:11	1
Trichlorofluoromethane	2.6		2.2	ug/m3			09/22/17 18:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 18:11	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 18:11	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 18:11	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 18:11	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 18:11	1
m,p-Xylene	ND		3.5	ug/m3			09/22/17 18:11	1
o-Xylene	ND		1.7	ug/m3			09/22/17 18:11	1
Naphthalene	ND		4.2	ug/m3			09/22/17 18:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130		09/22/17 18:11	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 130		09/22/17 18:11	1
Toluene-d8 (Surr)	101		70 - 130		09/22/17 18:11	1

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-05

Lab Sample ID: 320-31467-24

Date Collected: 09/06/17 14:32

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	18		5.0	ppb v/v			09/22/17 19:05	1
Benzene	0.59		0.40	ppb v/v			09/22/17 19:05	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 19:05	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 19:05	1
Bromoform	ND		0.40	ppb v/v			09/22/17 19:05	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 19:05	1
2-Butanone (MEK)	2.1		0.80	ppb v/v			09/22/17 19:05	1
Carbon disulfide	8.8		0.80	ppb v/v			09/22/17 19:05	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 19:05	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 19:05	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 19:05	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 19:05	1
Chloroform	1.1		0.30	ppb v/v			09/22/17 19:05	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 19:05	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 19:05	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 19:05	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 19:05	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 19:05	1
Dichlorodifluoromethane	0.56		0.40	ppb v/v			09/22/17 19:05	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 19:05	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 19:05	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 19:05	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 19:05	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 19:05	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 19:05	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 19:05	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 19:05	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 19:05	1
Ethylbenzene	1.1		0.40	ppb v/v			09/22/17 19:05	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 19:05	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 19:05	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 19:05	1
Methylene Chloride	0.94		0.40	ppb v/v			09/22/17 19:05	1
4-Methyl-2-pentanone (MIBK)	0.40		0.40	ppb v/v			09/22/17 19:05	1
Styrene	ND		0.40	ppb v/v			09/22/17 19:05	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 19:05	1
Tetrachloroethene	49		0.40	ppb v/v			09/22/17 19:05	1
Toluene	12		0.40	ppb v/v			09/22/17 19:05	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 19:05	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 19:05	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 19:05	1
Trichloroethene	4.2		0.40	ppb v/v			09/22/17 19:05	1
Trichlorofluoromethane	0.43		0.40	ppb v/v			09/22/17 19:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 19:05	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 19:05	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 19:05	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 19:05	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 19:05	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-05

Lab Sample ID: 320-31467-24

Date Collected: 09/06/17 14:32

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	2.2		0.80	ppb v/v			09/22/17 19:05	1
o-Xylene	ND		0.40	ppb v/v			09/22/17 19:05	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 19:05	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	42		12	ug/m3			09/22/17 19:05	1
Benzene	1.9		1.3	ug/m3			09/22/17 19:05	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 19:05	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 19:05	1
Bromoform	ND		4.1	ug/m3			09/22/17 19:05	1
Bromomethane	ND		3.1	ug/m3			09/22/17 19:05	1
2-Butanone (MEK)	6.1		2.4	ug/m3			09/22/17 19:05	1
Carbon disulfide	27		2.5	ug/m3			09/22/17 19:05	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 19:05	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 19:05	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 19:05	1
Chloroethane	ND		2.1	ug/m3			09/22/17 19:05	1
Chloroform	5.1		1.5	ug/m3			09/22/17 19:05	1
Chloromethane	ND		1.7	ug/m3			09/22/17 19:05	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 19:05	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 19:05	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 19:05	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 19:05	1
Dichlorodifluoromethane	2.8		2.0	ug/m3			09/22/17 19:05	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 19:05	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 19:05	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 19:05	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 19:05	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 19:05	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 19:05	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 19:05	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 19:05	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 19:05	1
Ethylbenzene	5.0		1.7	ug/m3			09/22/17 19:05	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 19:05	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 19:05	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 19:05	1
Methylene Chloride	3.3		1.4	ug/m3			09/22/17 19:05	1
4-Methyl-2-pentanone (MIBK)	1.6		1.6	ug/m3			09/22/17 19:05	1
Styrene	ND		1.7	ug/m3			09/22/17 19:05	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 19:05	1
Tetrachloroethene	330		2.7	ug/m3			09/22/17 19:05	1
Toluene	46		1.5	ug/m3			09/22/17 19:05	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 19:05	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 19:05	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 19:05	1
Trichloroethene	22		2.1	ug/m3			09/22/17 19:05	1
Trichlorofluoromethane	2.4		2.2	ug/m3			09/22/17 19:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 19:05	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-05

Lab Sample ID: 320-31467-24

Date Collected: 09/06/17 14:32

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 19:05	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 19:05	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 19:05	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 19:05	1
m,p-Xylene	9.5		3.5	ug/m3			09/22/17 19:05	1
o-Xylene	ND		1.7	ug/m3			09/22/17 19:05	1
Naphthalene	ND		4.2	ug/m3			09/22/17 19:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130				09/22/17 19:05	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130				09/22/17 19:05	1
Toluene-d8 (Surr)	101		70 - 130				09/22/17 19:05	1

Client Sample ID: G-170906-RA-06

Lab Sample ID: 320-31467-25

Date Collected: 09/06/17 14:49

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	21		5.0	ppb v/v			09/22/17 19:56	1
Benzene	ND		0.40	ppb v/v			09/22/17 19:56	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 19:56	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 19:56	1
Bromoform	ND		0.40	ppb v/v			09/22/17 19:56	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 19:56	1
2-Butanone (MEK)	3.2		0.80	ppb v/v			09/22/17 19:56	1
Carbon disulfide	2.1		0.80	ppb v/v			09/22/17 19:56	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 19:56	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 19:56	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 19:56	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 19:56	1
Chloroform	ND		0.30	ppb v/v			09/22/17 19:56	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 19:56	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 19:56	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 19:56	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 19:56	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 19:56	1
Dichlorodifluoromethane	1.0		0.40	ppb v/v			09/22/17 19:56	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 19:56	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 19:56	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 19:56	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 19:56	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 19:56	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 19:56	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 19:56	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 19:56	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 19:56	1
Ethylbenzene	ND		0.40	ppb v/v			09/22/17 19:56	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-06

Lab Sample ID: 320-31467-25

Date Collected: 09/06/17 14:49

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 19:56	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 19:56	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 19:56	1
Methylene Chloride	1.3		0.40	ppb v/v			09/22/17 19:56	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 19:56	1
Styrene	ND		0.40	ppb v/v			09/22/17 19:56	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 19:56	1
Tetrachloroethene	3.3		0.40	ppb v/v			09/22/17 19:56	1
Toluene	ND		0.40	ppb v/v			09/22/17 19:56	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 19:56	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 19:56	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 19:56	1
Trichloroethene	ND		0.40	ppb v/v			09/22/17 19:56	1
Trichlorofluoromethane	0.77		0.40	ppb v/v			09/22/17 19:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 19:56	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 19:56	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 19:56	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 19:56	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 19:56	1
m,p-Xylene	ND		0.80	ppb v/v			09/22/17 19:56	1
o-Xylene	ND		0.40	ppb v/v			09/22/17 19:56	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 19:56	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	50		12	ug/m3			09/22/17 19:56	1
Benzene	ND		1.3	ug/m3			09/22/17 19:56	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 19:56	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 19:56	1
Bromoform	ND		4.1	ug/m3			09/22/17 19:56	1
Bromomethane	ND		3.1	ug/m3			09/22/17 19:56	1
2-Butanone (MEK)	9.3		2.4	ug/m3			09/22/17 19:56	1
Carbon disulfide	6.7		2.5	ug/m3			09/22/17 19:56	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 19:56	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 19:56	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 19:56	1
Chloroethane	ND		2.1	ug/m3			09/22/17 19:56	1
Chloroform	ND		1.5	ug/m3			09/22/17 19:56	1
Chloromethane	ND		1.7	ug/m3			09/22/17 19:56	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 19:56	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 19:56	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 19:56	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 19:56	1
Dichlorodifluoromethane	4.9		2.0	ug/m3			09/22/17 19:56	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 19:56	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 19:56	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 19:56	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 19:56	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 19:56	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 19:56	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-06

Lab Sample ID: 320-31467-25

Date Collected: 09/06/17 14:49

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 19:56	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 19:56	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 19:56	1
Ethylbenzene	ND		1.7	ug/m3			09/22/17 19:56	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 19:56	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 19:56	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 19:56	1
Methylene Chloride	4.6		1.4	ug/m3			09/22/17 19:56	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 19:56	1
Styrene	ND		1.7	ug/m3			09/22/17 19:56	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 19:56	1
Tetrachloroethene	23		2.7	ug/m3			09/22/17 19:56	1
Toluene	ND		1.5	ug/m3			09/22/17 19:56	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 19:56	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 19:56	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 19:56	1
Trichloroethene	ND		2.1	ug/m3			09/22/17 19:56	1
Trichlorofluoromethane	4.3		2.2	ug/m3			09/22/17 19:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 19:56	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 19:56	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 19:56	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 19:56	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 19:56	1
m,p-Xylene	ND		3.5	ug/m3			09/22/17 19:56	1
o-Xylene	ND		1.7	ug/m3			09/22/17 19:56	1
Naphthalene	ND		4.2	ug/m3			09/22/17 19:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130				09/22/17 19:56	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130				09/22/17 19:56	1
Toluene-d8 (Surr)	97		70 - 130				09/22/17 19:56	1

Client Sample ID: G-170906-RA-07

Lab Sample ID: 320-31467-26

Date Collected: 09/06/17 15:15

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		27	ppb v/v			09/22/17 20:40	5.4
Benzene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
Benzyl chloride	ND		4.3	ppb v/v			09/22/17 20:40	5.4
Bromodichloromethane	ND		1.6	ppb v/v			09/22/17 20:40	5.4
Bromoform	ND		2.2	ppb v/v			09/22/17 20:40	5.4
Bromomethane	ND		4.3	ppb v/v			09/22/17 20:40	5.4
2-Butanone (MEK)	ND		4.3	ppb v/v			09/22/17 20:40	5.4
Carbon disulfide	5.5		4.3	ppb v/v			09/22/17 20:40	5.4
Carbon tetrachloride	ND		4.3	ppb v/v			09/22/17 20:40	5.4
Chlorobenzene	ND		1.6	ppb v/v			09/22/17 20:40	5.4

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-07

Lab Sample ID: 320-31467-26

Date Collected: 09/06/17 15:15

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		2.2	ppb v/v			09/22/17 20:40	5.4
Chloroethane	32		4.3	ppb v/v			09/22/17 20:40	5.4
Chloroform	2.2		1.6	ppb v/v			09/22/17 20:40	5.4
Chloromethane	110		4.3	ppb v/v			09/22/17 20:40	5.4
1,2-Dibromoethane (EDB)	ND		4.3	ppb v/v			09/22/17 20:40	5.4
1,2-Dichlorobenzene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
1,3-Dichlorobenzene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
1,4-Dichlorobenzene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
Dichlorodifluoromethane	8.4		2.2	ppb v/v			09/22/17 20:40	5.4
1,1-Dichloroethane	ND		1.6	ppb v/v			09/22/17 20:40	5.4
1,2-Dichloroethane	ND		4.3	ppb v/v			09/22/17 20:40	5.4
1,1-Dichloroethene	ND		4.3	ppb v/v			09/22/17 20:40	5.4
cis-1,2-Dichloroethene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
trans-1,2-Dichloroethene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
1,2-Dichloropropane	ND		2.2	ppb v/v			09/22/17 20:40	5.4
cis-1,3-Dichloropropene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
trans-1,3-Dichloropropene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.2	ppb v/v			09/22/17 20:40	5.4
Ethylbenzene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
4-Ethyltoluene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
Hexachlorobutadiene	ND		11	ppb v/v			09/22/17 20:40	5.4
2-Hexanone	ND		2.2	ppb v/v			09/22/17 20:40	5.4
Methylene Chloride	ND		2.2	ppb v/v			09/22/17 20:40	5.4
4-Methyl-2-pentanone (MIBK)	5.8		2.2	ppb v/v			09/22/17 20:40	5.4
Styrene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
1,1,2,2-Tetrachloroethane	ND		2.2	ppb v/v			09/22/17 20:40	5.4
Tetrachloroethene	280		2.2	ppb v/v			09/22/17 20:40	5.4
Toluene	4.1		2.2	ppb v/v			09/22/17 20:40	5.4
1,2,4-Trichlorobenzene	ND		11	ppb v/v			09/22/17 20:40	5.4
1,1,1-Trichloroethane	ND		1.6	ppb v/v			09/22/17 20:40	5.4
1,1,2-Trichloroethane	ND		2.2	ppb v/v			09/22/17 20:40	5.4
Trichloroethene	5.2		2.2	ppb v/v			09/22/17 20:40	5.4
Trichlorofluoromethane	ND		2.2	ppb v/v			09/22/17 20:40	5.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.2	ppb v/v			09/22/17 20:40	5.4
1,2,4-Trimethylbenzene	ND		4.3	ppb v/v			09/22/17 20:40	5.4
1,3,5-Trimethylbenzene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
Vinyl acetate	ND		4.3	ppb v/v			09/22/17 20:40	5.4
Vinyl chloride	ND		2.2	ppb v/v			09/22/17 20:40	5.4
m,p-Xylene	4.9		4.3	ppb v/v			09/22/17 20:40	5.4
o-Xylene	ND		2.2	ppb v/v			09/22/17 20:40	5.4
Naphthalene	ND		4.3	ppb v/v			09/22/17 20:40	5.4
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		64	ug/m3			09/22/17 20:40	5.4
Benzene	ND		6.9	ug/m3			09/22/17 20:40	5.4
Benzyl chloride	ND		22	ug/m3			09/22/17 20:40	5.4
Bromodichloromethane	ND		11	ug/m3			09/22/17 20:40	5.4
Bromoform	ND		22	ug/m3			09/22/17 20:40	5.4
Bromomethane	ND		17	ug/m3			09/22/17 20:40	5.4

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-07

Lab Sample ID: 320-31467-26

Date Collected: 09/06/17 15:15

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		13	ug/m3			09/22/17 20:40	5.4
Carbon disulfide	17		13	ug/m3			09/22/17 20:40	5.4
Carbon tetrachloride	ND		27	ug/m3			09/22/17 20:40	5.4
Chlorobenzene	ND		7.5	ug/m3			09/22/17 20:40	5.4
Dibromochloromethane	ND		18	ug/m3			09/22/17 20:40	5.4
Chloroethane	84		11	ug/m3			09/22/17 20:40	5.4
Chloroform	11		7.9	ug/m3			09/22/17 20:40	5.4
Chloromethane	220		8.9	ug/m3			09/22/17 20:40	5.4
1,2-Dibromoethane (EDB)	ND		33	ug/m3			09/22/17 20:40	5.4
1,2-Dichlorobenzene	ND		13	ug/m3			09/22/17 20:40	5.4
1,3-Dichlorobenzene	ND		13	ug/m3			09/22/17 20:40	5.4
1,4-Dichlorobenzene	ND		13	ug/m3			09/22/17 20:40	5.4
Dichlorodifluoromethane	42		11	ug/m3			09/22/17 20:40	5.4
1,1-Dichloroethane	ND		6.6	ug/m3			09/22/17 20:40	5.4
1,2-Dichloroethane	ND		17	ug/m3			09/22/17 20:40	5.4
1,1-Dichloroethene	ND		17	ug/m3			09/22/17 20:40	5.4
cis-1,2-Dichloroethene	ND		8.6	ug/m3			09/22/17 20:40	5.4
trans-1,2-Dichloroethene	ND		8.6	ug/m3			09/22/17 20:40	5.4
1,2-Dichloropropane	ND		10	ug/m3			09/22/17 20:40	5.4
cis-1,3-Dichloropropene	ND		9.8	ug/m3			09/22/17 20:40	5.4
trans-1,3-Dichloropropene	ND		9.8	ug/m3			09/22/17 20:40	5.4
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		15	ug/m3			09/22/17 20:40	5.4
Ethylbenzene	ND		9.4	ug/m3			09/22/17 20:40	5.4
4-Ethyltoluene	ND		11	ug/m3			09/22/17 20:40	5.4
Hexachlorobutadiene	ND		120	ug/m3			09/22/17 20:40	5.4
2-Hexanone	ND		8.9	ug/m3			09/22/17 20:40	5.4
Methylene Chloride	ND		7.5	ug/m3			09/22/17 20:40	5.4
4-Methyl-2-pentanone (MIBK)	24		8.8	ug/m3			09/22/17 20:40	5.4
Styrene	ND		9.2	ug/m3			09/22/17 20:40	5.4
1,1,2,2-Tetrachloroethane	ND		15	ug/m3			09/22/17 20:40	5.4
Tetrachloroethene	1900		15	ug/m3			09/22/17 20:40	5.4
Toluene	15		8.1	ug/m3			09/22/17 20:40	5.4
1,2,4-Trichlorobenzene	ND		80	ug/m3			09/22/17 20:40	5.4
1,1,1-Trichloroethane	ND		8.8	ug/m3			09/22/17 20:40	5.4
1,1,2-Trichloroethane	ND		12	ug/m3			09/22/17 20:40	5.4
Trichloroethene	28		12	ug/m3			09/22/17 20:40	5.4
Trichlorofluoromethane	ND		12	ug/m3			09/22/17 20:40	5.4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		17	ug/m3			09/22/17 20:40	5.4
1,2,4-Trimethylbenzene	ND		21	ug/m3			09/22/17 20:40	5.4
1,3,5-Trimethylbenzene	ND		11	ug/m3			09/22/17 20:40	5.4
Vinyl acetate	ND		15	ug/m3			09/22/17 20:40	5.4
Vinyl chloride	ND		5.5	ug/m3			09/22/17 20:40	5.4
m,p-Xylene	21		19	ug/m3			09/22/17 20:40	5.4
o-Xylene	ND		9.4	ug/m3			09/22/17 20:40	5.4
Naphthalene	ND		23	ug/m3			09/22/17 20:40	5.4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130		09/22/17 20:40	5.4
1,2-Dichloroethane-d4 (Surr)	96		70 - 130		09/22/17 20:40	5.4

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-07

Lab Sample ID: 320-31467-26

Date Collected: 09/06/17 15:15

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		09/22/17 20:40	5.4

Client Sample ID: G-170906-RA-08

Lab Sample ID: 320-31467-27

Date Collected: 09/06/17 15:14

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		17	ppb v/v			09/22/17 21:26	3.44
Benzene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Benzyl chloride	ND		2.8	ppb v/v			09/22/17 21:26	3.44
Bromodichloromethane	ND		1.0	ppb v/v			09/22/17 21:26	3.44
Bromoform	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Bromomethane	ND		2.8	ppb v/v			09/22/17 21:26	3.44
2-Butanone (MEK)	3.2		2.8	ppb v/v			09/22/17 21:26	3.44
Carbon disulfide	4.4		2.8	ppb v/v			09/22/17 21:26	3.44
Carbon tetrachloride	ND		2.8	ppb v/v			09/22/17 21:26	3.44
Chlorobenzene	ND		1.0	ppb v/v			09/22/17 21:26	3.44
Dibromochloromethane	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Chloroethane	ND		2.8	ppb v/v			09/22/17 21:26	3.44
Chloroform	1.2		1.0	ppb v/v			09/22/17 21:26	3.44
Chloromethane	ND		2.8	ppb v/v			09/22/17 21:26	3.44
1,2-Dibromoethane (EDB)	ND		2.8	ppb v/v			09/22/17 21:26	3.44
1,2-Dichlorobenzene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
1,3-Dichlorobenzene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
1,4-Dichlorobenzene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Dichlorodifluoromethane	8.1		1.4	ppb v/v			09/22/17 21:26	3.44
1,1-Dichloroethane	ND		1.0	ppb v/v			09/22/17 21:26	3.44
1,2-Dichloroethane	ND		2.8	ppb v/v			09/22/17 21:26	3.44
1,1-Dichloroethene	ND		2.8	ppb v/v			09/22/17 21:26	3.44
cis-1,2-Dichloroethene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
trans-1,2-Dichloroethene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
1,2-Dichloropropane	ND		1.4	ppb v/v			09/22/17 21:26	3.44
cis-1,3-Dichloropropene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
trans-1,3-Dichloropropene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Ethylbenzene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
4-Ethyltoluene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Hexachlorobutadiene	ND		6.9	ppb v/v			09/22/17 21:26	3.44
2-Hexanone	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Methylene Chloride	ND		1.4	ppb v/v			09/22/17 21:26	3.44
4-Methyl-2-pentanone (MIBK)	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Styrene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
1,1,2,2-Tetrachloroethane	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Tetrachloroethene	290		1.4	ppb v/v			09/22/17 21:26	3.44
Toluene	8.2		1.4	ppb v/v			09/22/17 21:26	3.44
1,2,4-Trichlorobenzene	ND		6.9	ppb v/v			09/22/17 21:26	3.44

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-08

Lab Sample ID: 320-31467-27

Date Collected: 09/06/17 15:14

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	ppb v/v			09/22/17 21:26	3.44
1,1,2-Trichloroethane	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Trichloroethene	4.9		1.4	ppb v/v			09/22/17 21:26	3.44
Trichlorofluoromethane	ND		1.4	ppb v/v			09/22/17 21:26	3.44
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.4	ppb v/v			09/22/17 21:26	3.44
1,2,4-Trimethylbenzene	ND		2.8	ppb v/v			09/22/17 21:26	3.44
1,3,5-Trimethylbenzene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Vinyl acetate	ND		2.8	ppb v/v			09/22/17 21:26	3.44
Vinyl chloride	ND		1.4	ppb v/v			09/22/17 21:26	3.44
m,p-Xylene	ND		2.8	ppb v/v			09/22/17 21:26	3.44
o-Xylene	ND		1.4	ppb v/v			09/22/17 21:26	3.44
Naphthalene	ND		2.8	ppb v/v			09/22/17 21:26	3.44
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		41	ug/m3			09/22/17 21:26	3.44
Benzene	ND		4.4	ug/m3			09/22/17 21:26	3.44
Benzyl chloride	ND		14	ug/m3			09/22/17 21:26	3.44
Bromodichloromethane	ND		6.9	ug/m3			09/22/17 21:26	3.44
Bromoform	ND		14	ug/m3			09/22/17 21:26	3.44
Bromomethane	ND		11	ug/m3			09/22/17 21:26	3.44
2-Butanone (MEK)	9.4		8.1	ug/m3			09/22/17 21:26	3.44
Carbon disulfide	14		8.6	ug/m3			09/22/17 21:26	3.44
Carbon tetrachloride	ND		17	ug/m3			09/22/17 21:26	3.44
Chlorobenzene	ND		4.8	ug/m3			09/22/17 21:26	3.44
Dibromochloromethane	ND		12	ug/m3			09/22/17 21:26	3.44
Chloroethane	ND		7.3	ug/m3			09/22/17 21:26	3.44
Chloroform	5.6		5.0	ug/m3			09/22/17 21:26	3.44
Chloromethane	ND		5.7	ug/m3			09/22/17 21:26	3.44
1,2-Dibromoethane (EDB)	ND		21	ug/m3			09/22/17 21:26	3.44
1,2-Dichlorobenzene	ND		8.3	ug/m3			09/22/17 21:26	3.44
1,3-Dichlorobenzene	ND		8.3	ug/m3			09/22/17 21:26	3.44
1,4-Dichlorobenzene	ND		8.3	ug/m3			09/22/17 21:26	3.44
Dichlorodifluoromethane	40		6.8	ug/m3			09/22/17 21:26	3.44
1,1-Dichloroethane	ND		4.2	ug/m3			09/22/17 21:26	3.44
1,2-Dichloroethane	ND		11	ug/m3			09/22/17 21:26	3.44
1,1-Dichloroethene	ND		11	ug/m3			09/22/17 21:26	3.44
cis-1,2-Dichloroethene	ND		5.5	ug/m3			09/22/17 21:26	3.44
trans-1,2-Dichloroethene	ND		5.5	ug/m3			09/22/17 21:26	3.44
1,2-Dichloropropane	ND		6.4	ug/m3			09/22/17 21:26	3.44
cis-1,3-Dichloropropene	ND		6.2	ug/m3			09/22/17 21:26	3.44
trans-1,3-Dichloropropene	ND		6.2	ug/m3			09/22/17 21:26	3.44
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		9.6	ug/m3			09/22/17 21:26	3.44
Ethylbenzene	ND		6.0	ug/m3			09/22/17 21:26	3.44
4-Ethyltoluene	ND		6.8	ug/m3			09/22/17 21:26	3.44
Hexachlorobutadiene	ND		73	ug/m3			09/22/17 21:26	3.44
2-Hexanone	ND		5.6	ug/m3			09/22/17 21:26	3.44
Methylene Chloride	ND		4.8	ug/m3			09/22/17 21:26	3.44
4-Methyl-2-pentanone (MIBK)	ND		5.6	ug/m3			09/22/17 21:26	3.44
Styrene	ND		5.9	ug/m3			09/22/17 21:26	3.44

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-08

Lab Sample ID: 320-31467-27

Date Collected: 09/06/17 15:14

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		9.4	ug/m3			09/22/17 21:26	3.44
Tetrachloroethene	2000		9.3	ug/m3			09/22/17 21:26	3.44
Toluene	31		5.2	ug/m3			09/22/17 21:26	3.44
1,2,4-Trichlorobenzene	ND		51	ug/m3			09/22/17 21:26	3.44
1,1,1-Trichloroethane	ND		5.6	ug/m3			09/22/17 21:26	3.44
1,1,2-Trichloroethane	ND		7.5	ug/m3			09/22/17 21:26	3.44
Trichloroethene	26		7.4	ug/m3			09/22/17 21:26	3.44
Trichlorofluoromethane	ND		7.7	ug/m3			09/22/17 21:26	3.44
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		11	ug/m3			09/22/17 21:26	3.44
1,2,4-Trimethylbenzene	ND		14	ug/m3			09/22/17 21:26	3.44
1,3,5-Trimethylbenzene	ND		6.8	ug/m3			09/22/17 21:26	3.44
Vinyl acetate	ND		9.7	ug/m3			09/22/17 21:26	3.44
Vinyl chloride	ND		3.5	ug/m3			09/22/17 21:26	3.44
m,p-Xylene	ND		12	ug/m3			09/22/17 21:26	3.44
o-Xylene	ND		6.0	ug/m3			09/22/17 21:26	3.44
Naphthalene	ND		14	ug/m3			09/22/17 21:26	3.44

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130		09/22/17 21:26	3.44
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		09/22/17 21:26	3.44
Toluene-d8 (Surr)	99		70 - 130		09/22/17 21:26	3.44

Client Sample ID: G-170907-RA-09

Lab Sample ID: 320-31467-28

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	14		6.5	ppb v/v			09/22/17 22:15	1.3
Benzene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
Benzyl chloride	ND		1.0	ppb v/v			09/22/17 22:15	1.3
Bromodichloromethane	ND		0.39	ppb v/v			09/22/17 22:15	1.3
Bromoform	ND		0.52	ppb v/v			09/22/17 22:15	1.3
Bromomethane	ND		1.0	ppb v/v			09/22/17 22:15	1.3
2-Butanone (MEK)	3.0		1.0	ppb v/v			09/22/17 22:15	1.3
Carbon disulfide	3.8		1.0	ppb v/v			09/22/17 22:15	1.3
Carbon tetrachloride	ND		1.0	ppb v/v			09/22/17 22:15	1.3
Chlorobenzene	ND		0.39	ppb v/v			09/22/17 22:15	1.3
Dibromochloromethane	ND		0.52	ppb v/v			09/22/17 22:15	1.3
Chloroethane	ND		1.0	ppb v/v			09/22/17 22:15	1.3
Chloroform	ND		0.39	ppb v/v			09/22/17 22:15	1.3
Chloromethane	ND		1.0	ppb v/v			09/22/17 22:15	1.3
1,2-Dibromoethane (EDB)	ND		1.0	ppb v/v			09/22/17 22:15	1.3
1,2-Dichlorobenzene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
1,3-Dichlorobenzene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
1,4-Dichlorobenzene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
Dichlorodifluoromethane	0.58		0.52	ppb v/v			09/22/17 22:15	1.3
1,1-Dichloroethane	ND		0.39	ppb v/v			09/22/17 22:15	1.3

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-09

Lab Sample ID: 320-31467-28

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	ppb v/v			09/22/17 22:15	1.3
1,1-Dichloroethene	ND		1.0	ppb v/v			09/22/17 22:15	1.3
cis-1,2-Dichloroethene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
trans-1,2-Dichloroethene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
1,2-Dichloropropane	ND		0.52	ppb v/v			09/22/17 22:15	1.3
cis-1,3-Dichloropropene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
trans-1,3-Dichloropropene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.52	ppb v/v			09/22/17 22:15	1.3
Ethylbenzene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
4-Ethyltoluene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
Hexachlorobutadiene	ND		2.6	ppb v/v			09/22/17 22:15	1.3
2-Hexanone	ND		0.52	ppb v/v			09/22/17 22:15	1.3
Methylene Chloride	0.76		0.52	ppb v/v			09/22/17 22:15	1.3
4-Methyl-2-pentanone (MIBK)	1.1		0.52	ppb v/v			09/22/17 22:15	1.3
Styrene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
1,1,2,2-Tetrachloroethane	ND		0.52	ppb v/v			09/22/17 22:15	1.3
Tetrachloroethene	36		0.52	ppb v/v			09/22/17 22:15	1.3
Toluene	2.9		0.52	ppb v/v			09/22/17 22:15	1.3
1,2,4-Trichlorobenzene	ND		2.6	ppb v/v			09/22/17 22:15	1.3
1,1,1-Trichloroethane	ND		0.39	ppb v/v			09/22/17 22:15	1.3
1,1,2-Trichloroethane	ND		0.52	ppb v/v			09/22/17 22:15	1.3
Trichloroethene	0.64		0.52	ppb v/v			09/22/17 22:15	1.3
Trichlorofluoromethane	ND		0.52	ppb v/v			09/22/17 22:15	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.52	ppb v/v			09/22/17 22:15	1.3
1,2,4-Trimethylbenzene	ND		1.0	ppb v/v			09/22/17 22:15	1.3
1,3,5-Trimethylbenzene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
Vinyl acetate	ND		1.0	ppb v/v			09/22/17 22:15	1.3
Vinyl chloride	ND		0.52	ppb v/v			09/22/17 22:15	1.3
m,p-Xylene	ND		1.0	ppb v/v			09/22/17 22:15	1.3
o-Xylene	ND		0.52	ppb v/v			09/22/17 22:15	1.3
Naphthalene	ND		1.0	ppb v/v			09/22/17 22:15	1.3
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	33		15	ug/m3			09/22/17 22:15	1.3
Benzene	ND		1.7	ug/m3			09/22/17 22:15	1.3
Benzyl chloride	ND		5.4	ug/m3			09/22/17 22:15	1.3
Bromodichloromethane	ND		2.6	ug/m3			09/22/17 22:15	1.3
Bromoform	ND		5.4	ug/m3			09/22/17 22:15	1.3
Bromomethane	ND		4.0	ug/m3			09/22/17 22:15	1.3
2-Butanone (MEK)	8.8		3.1	ug/m3			09/22/17 22:15	1.3
Carbon disulfide	12		3.2	ug/m3			09/22/17 22:15	1.3
Carbon tetrachloride	ND		6.5	ug/m3			09/22/17 22:15	1.3
Chlorobenzene	ND		1.8	ug/m3			09/22/17 22:15	1.3
Dibromochloromethane	ND		4.4	ug/m3			09/22/17 22:15	1.3
Chloroethane	ND		2.7	ug/m3			09/22/17 22:15	1.3
Chloroform	ND		1.9	ug/m3			09/22/17 22:15	1.3
Chloromethane	ND		2.1	ug/m3			09/22/17 22:15	1.3
1,2-Dibromoethane (EDB)	ND		8.0	ug/m3			09/22/17 22:15	1.3
1,2-Dichlorobenzene	ND		3.1	ug/m3			09/22/17 22:15	1.3

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-09

Lab Sample ID: 320-31467-28

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		3.1	ug/m3			09/22/17 22:15	1.3
1,4-Dichlorobenzene	ND		3.1	ug/m3			09/22/17 22:15	1.3
Dichlorodifluoromethane	2.9		2.6	ug/m3			09/22/17 22:15	1.3
1,1-Dichloroethane	ND		1.6	ug/m3			09/22/17 22:15	1.3
1,2-Dichloroethane	ND		4.2	ug/m3			09/22/17 22:15	1.3
1,1-Dichloroethene	ND		4.1	ug/m3			09/22/17 22:15	1.3
cis-1,2-Dichloroethene	ND		2.1	ug/m3			09/22/17 22:15	1.3
trans-1,2-Dichloroethene	ND		2.1	ug/m3			09/22/17 22:15	1.3
1,2-Dichloropropane	ND		2.4	ug/m3			09/22/17 22:15	1.3
cis-1,3-Dichloropropene	ND		2.4	ug/m3			09/22/17 22:15	1.3
trans-1,3-Dichloropropene	ND		2.4	ug/m3			09/22/17 22:15	1.3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		3.6	ug/m3			09/22/17 22:15	1.3
Ethylbenzene	ND		2.3	ug/m3			09/22/17 22:15	1.3
4-Ethyltoluene	ND		2.6	ug/m3			09/22/17 22:15	1.3
Hexachlorobutadiene	ND		28	ug/m3			09/22/17 22:15	1.3
2-Hexanone	ND		2.1	ug/m3			09/22/17 22:15	1.3
Methylene Chloride	2.6		1.8	ug/m3			09/22/17 22:15	1.3
4-Methyl-2-pentanone (MIBK)	4.5		2.1	ug/m3			09/22/17 22:15	1.3
Styrene	ND		2.2	ug/m3			09/22/17 22:15	1.3
1,1,2,2-Tetrachloroethane	ND		3.6	ug/m3			09/22/17 22:15	1.3
Tetrachloroethene	240		3.5	ug/m3			09/22/17 22:15	1.3
Toluene	11		2.0	ug/m3			09/22/17 22:15	1.3
1,2,4-Trichlorobenzene	ND		19	ug/m3			09/22/17 22:15	1.3
1,1,1-Trichloroethane	ND		2.1	ug/m3			09/22/17 22:15	1.3
1,1,2-Trichloroethane	ND		2.8	ug/m3			09/22/17 22:15	1.3
Trichloroethene	3.4		2.8	ug/m3			09/22/17 22:15	1.3
Trichlorofluoromethane	ND		2.9	ug/m3			09/22/17 22:15	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	ug/m3			09/22/17 22:15	1.3
1,2,4-Trimethylbenzene	ND		5.1	ug/m3			09/22/17 22:15	1.3
1,3,5-Trimethylbenzene	ND		2.6	ug/m3			09/22/17 22:15	1.3
Vinyl acetate	ND		3.7	ug/m3			09/22/17 22:15	1.3
Vinyl chloride	ND		1.3	ug/m3			09/22/17 22:15	1.3
m,p-Xylene	ND		4.5	ug/m3			09/22/17 22:15	1.3
o-Xylene	ND		2.3	ug/m3			09/22/17 22:15	1.3
Naphthalene	ND		5.5	ug/m3			09/22/17 22:15	1.3
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130				09/22/17 22:15	1.3
1,2-Dichloroethane-d4 (Surr)	99		70 - 130				09/22/17 22:15	1.3
Toluene-d8 (Surr)	99		70 - 130				09/22/17 22:15	1.3

Client Sample ID: G-170907-RA-10

Lab Sample ID: 320-31467-29

Date Collected: 09/07/17 09:49

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	16		5.0	ppb v/v			09/22/17 23:08	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-10

Lab Sample ID: 320-31467-29

Date Collected: 09/07/17 09:49

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.73		0.40	ppb v/v			09/22/17 23:08	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 23:08	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 23:08	1
Bromoform	ND		0.40	ppb v/v			09/22/17 23:08	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 23:08	1
2-Butanone (MEK)	1.5		0.80	ppb v/v			09/22/17 23:08	1
Carbon disulfide	18		0.80	ppb v/v			09/22/17 23:08	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 23:08	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 23:08	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 23:08	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 23:08	1
Chloroform	ND		0.30	ppb v/v			09/22/17 23:08	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 23:08	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 23:08	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 23:08	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 23:08	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 23:08	1
Dichlorodifluoromethane	7.7		0.40	ppb v/v			09/22/17 23:08	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 23:08	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 23:08	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 23:08	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 23:08	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 23:08	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 23:08	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 23:08	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 23:08	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 23:08	1
Ethylbenzene	1.8		0.40	ppb v/v			09/22/17 23:08	1
4-Ethyltoluene	0.52		0.40	ppb v/v			09/22/17 23:08	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 23:08	1
2-Hexanone	0.42		0.40	ppb v/v			09/22/17 23:08	1
Methylene Chloride	ND		0.40	ppb v/v			09/22/17 23:08	1
4-Methyl-2-pentanone (MIBK)	0.78		0.40	ppb v/v			09/22/17 23:08	1
Styrene	ND		0.40	ppb v/v			09/22/17 23:08	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 23:08	1
Tetrachloroethene	42		0.40	ppb v/v			09/22/17 23:08	1
Toluene	6.8		0.40	ppb v/v			09/22/17 23:08	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 23:08	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 23:08	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 23:08	1
Trichloroethene	2.4		0.40	ppb v/v			09/22/17 23:08	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/22/17 23:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 23:08	1
1,2,4-Trimethylbenzene	1.1		0.80	ppb v/v			09/22/17 23:08	1
1,3,5-Trimethylbenzene	0.42		0.40	ppb v/v			09/22/17 23:08	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 23:08	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 23:08	1
m,p-Xylene	6.5		0.80	ppb v/v			09/22/17 23:08	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-10

Lab Sample ID: 320-31467-29

Date Collected: 09/07/17 09:49

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	2.3		0.40	ppb v/v			09/22/17 23:08	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 23:08	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	39		12	ug/m3			09/22/17 23:08	1
Benzene	2.3		1.3	ug/m3			09/22/17 23:08	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 23:08	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 23:08	1
Bromoform	ND		4.1	ug/m3			09/22/17 23:08	1
Bromomethane	ND		3.1	ug/m3			09/22/17 23:08	1
2-Butanone (MEK)	4.4		2.4	ug/m3			09/22/17 23:08	1
Carbon disulfide	55		2.5	ug/m3			09/22/17 23:08	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 23:08	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 23:08	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 23:08	1
Chloroethane	ND		2.1	ug/m3			09/22/17 23:08	1
Chloroform	ND		1.5	ug/m3			09/22/17 23:08	1
Chloromethane	ND		1.7	ug/m3			09/22/17 23:08	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 23:08	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 23:08	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 23:08	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 23:08	1
Dichlorodifluoromethane	38		2.0	ug/m3			09/22/17 23:08	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 23:08	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 23:08	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 23:08	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 23:08	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 23:08	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 23:08	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 23:08	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 23:08	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 23:08	1
Ethylbenzene	7.9		1.7	ug/m3			09/22/17 23:08	1
4-Ethyltoluene	2.6		2.0	ug/m3			09/22/17 23:08	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 23:08	1
2-Hexanone	1.7		1.6	ug/m3			09/22/17 23:08	1
Methylene Chloride	ND		1.4	ug/m3			09/22/17 23:08	1
4-Methyl-2-pentanone (MIBK)	3.2		1.6	ug/m3			09/22/17 23:08	1
Styrene	ND		1.7	ug/m3			09/22/17 23:08	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 23:08	1
Tetrachloroethene	290		2.7	ug/m3			09/22/17 23:08	1
Toluene	26		1.5	ug/m3			09/22/17 23:08	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 23:08	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 23:08	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 23:08	1
Trichloroethene	13		2.1	ug/m3			09/22/17 23:08	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/22/17 23:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 23:08	1
1,2,4-Trimethylbenzene	5.5		3.9	ug/m3			09/22/17 23:08	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-10

Lab Sample ID: 320-31467-29

Date Collected: 09/07/17 09:49

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	2.1		2.0	ug/m3			09/22/17 23:08	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 23:08	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 23:08	1
m,p-Xylene	28		3.5	ug/m3			09/22/17 23:08	1
o-Xylene	10		1.7	ug/m3			09/22/17 23:08	1
Naphthalene	ND		4.2	ug/m3			09/22/17 23:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				09/22/17 23:08	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130				09/22/17 23:08	1
Toluene-d8 (Surr)	100		70 - 130				09/22/17 23:08	1

Client Sample ID: G-170907-RA-21

Lab Sample ID: 320-31467-30

Date Collected: 09/07/17 10:58

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	12		6.5	ppb v/v			09/22/17 23:58	1.3
Benzene	ND		0.52	ppb v/v			09/22/17 23:58	1.3
Benzyl chloride	ND		1.0	ppb v/v			09/22/17 23:58	1.3
Bromodichloromethane	ND		0.39	ppb v/v			09/22/17 23:58	1.3
Bromoform	ND		0.52	ppb v/v			09/22/17 23:58	1.3
Bromomethane	ND		1.0	ppb v/v			09/22/17 23:58	1.3
2-Butanone (MEK)	3.0		1.0	ppb v/v			09/22/17 23:58	1.3
Carbon disulfide	11		1.0	ppb v/v			09/22/17 23:58	1.3
Carbon tetrachloride	3.6		1.0	ppb v/v			09/22/17 23:58	1.3
Chlorobenzene	ND		0.39	ppb v/v			09/22/17 23:58	1.3
Dibromochloromethane	ND		0.52	ppb v/v			09/22/17 23:58	1.3
Chloroethane	ND		1.0	ppb v/v			09/22/17 23:58	1.3
Chloroform	24		0.39	ppb v/v			09/22/17 23:58	1.3
Chloromethane	ND		1.0	ppb v/v			09/22/17 23:58	1.3
1,2-Dibromoethane (EDB)	ND		1.0	ppb v/v			09/22/17 23:58	1.3
1,2-Dichlorobenzene	ND		0.52	ppb v/v			09/22/17 23:58	1.3
1,3-Dichlorobenzene	ND		0.52	ppb v/v			09/22/17 23:58	1.3
1,4-Dichlorobenzene	ND		0.52	ppb v/v			09/22/17 23:58	1.3
Dichlorodifluoromethane	82		0.52	ppb v/v			09/22/17 23:58	1.3
1,1-Dichloroethane	ND		0.39	ppb v/v			09/22/17 23:58	1.3
1,2-Dichloroethane	ND		1.0	ppb v/v			09/22/17 23:58	1.3
1,1-Dichloroethene	ND		1.0	ppb v/v			09/22/17 23:58	1.3
cis-1,2-Dichloroethene	ND		0.52	ppb v/v			09/22/17 23:58	1.3
trans-1,2-Dichloroethene	ND		0.52	ppb v/v			09/22/17 23:58	1.3
1,2-Dichloropropane	ND		0.52	ppb v/v			09/22/17 23:58	1.3
cis-1,3-Dichloropropene	ND		0.52	ppb v/v			09/22/17 23:58	1.3
trans-1,3-Dichloropropene	ND		0.52	ppb v/v			09/22/17 23:58	1.3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.52	ppb v/v			09/22/17 23:58	1.3
Ethylbenzene	2.2		0.52	ppb v/v			09/22/17 23:58	1.3
4-Ethyltoluene	ND		0.52	ppb v/v			09/22/17 23:58	1.3

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-21

Lab Sample ID: 320-31467-30

Date Collected: 09/07/17 10:58

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		2.6	ppb v/v			09/22/17 23:58	1.3
2-Hexanone	ND		0.52	ppb v/v			09/22/17 23:58	1.3
Methylene Chloride	ND		0.52	ppb v/v			09/22/17 23:58	1.3
4-Methyl-2-pentanone (MIBK)	1.8		0.52	ppb v/v			09/22/17 23:58	1.3
Styrene	ND		0.52	ppb v/v			09/22/17 23:58	1.3
1,1,2,2-Tetrachloroethane	ND		0.52	ppb v/v			09/22/17 23:58	1.3
Tetrachloroethene	32		0.52	ppb v/v			09/22/17 23:58	1.3
Toluene	4.8		0.52	ppb v/v			09/22/17 23:58	1.3
1,2,4-Trichlorobenzene	ND		2.6	ppb v/v			09/22/17 23:58	1.3
1,1,1-Trichloroethane	ND		0.39	ppb v/v			09/22/17 23:58	1.3
1,1,2-Trichloroethane	ND		0.52	ppb v/v			09/22/17 23:58	1.3
Trichloroethene	0.98		0.52	ppb v/v			09/22/17 23:58	1.3
Trichlorofluoromethane	ND		0.52	ppb v/v			09/22/17 23:58	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.52	ppb v/v			09/22/17 23:58	1.3
1,2,4-Trimethylbenzene	1.5		1.0	ppb v/v			09/22/17 23:58	1.3
1,3,5-Trimethylbenzene	0.54		0.52	ppb v/v			09/22/17 23:58	1.3
Vinyl acetate	ND		1.0	ppb v/v			09/22/17 23:58	1.3
Vinyl chloride	ND		0.52	ppb v/v			09/22/17 23:58	1.3
m,p-Xylene	9.2		1.0	ppb v/v			09/22/17 23:58	1.3
o-Xylene	4.0		0.52	ppb v/v			09/22/17 23:58	1.3
Naphthalene	ND		1.0	ppb v/v			09/22/17 23:58	1.3
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	28		15	ug/m3			09/22/17 23:58	1.3
Benzene	ND		1.7	ug/m3			09/22/17 23:58	1.3
Benzyl chloride	ND		5.4	ug/m3			09/22/17 23:58	1.3
Bromodichloromethane	ND		2.6	ug/m3			09/22/17 23:58	1.3
Bromoform	ND		5.4	ug/m3			09/22/17 23:58	1.3
Bromomethane	ND		4.0	ug/m3			09/22/17 23:58	1.3
2-Butanone (MEK)	8.9		3.1	ug/m3			09/22/17 23:58	1.3
Carbon disulfide	34		3.2	ug/m3			09/22/17 23:58	1.3
Carbon tetrachloride	23		6.5	ug/m3			09/22/17 23:58	1.3
Chlorobenzene	ND		1.8	ug/m3			09/22/17 23:58	1.3
Dibromochloromethane	ND		4.4	ug/m3			09/22/17 23:58	1.3
Chloroethane	ND		2.7	ug/m3			09/22/17 23:58	1.3
Chloroform	110		1.9	ug/m3			09/22/17 23:58	1.3
Chloromethane	ND		2.1	ug/m3			09/22/17 23:58	1.3
1,2-Dibromoethane (EDB)	ND		8.0	ug/m3			09/22/17 23:58	1.3
1,2-Dichlorobenzene	ND		3.1	ug/m3			09/22/17 23:58	1.3
1,3-Dichlorobenzene	ND		3.1	ug/m3			09/22/17 23:58	1.3
1,4-Dichlorobenzene	ND		3.1	ug/m3			09/22/17 23:58	1.3
Dichlorodifluoromethane	400		2.6	ug/m3			09/22/17 23:58	1.3
1,1-Dichloroethane	ND		1.6	ug/m3			09/22/17 23:58	1.3
1,2-Dichloroethane	ND		4.2	ug/m3			09/22/17 23:58	1.3
1,1-Dichloroethene	ND		4.1	ug/m3			09/22/17 23:58	1.3
cis-1,2-Dichloroethene	ND		2.1	ug/m3			09/22/17 23:58	1.3
trans-1,2-Dichloroethene	ND		2.1	ug/m3			09/22/17 23:58	1.3
1,2-Dichloropropane	ND		2.4	ug/m3			09/22/17 23:58	1.3
cis-1,3-Dichloropropene	ND		2.4	ug/m3			09/22/17 23:58	1.3

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-21

Lab Sample ID: 320-31467-30

Date Collected: 09/07/17 10:58

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		2.4	ug/m3			09/22/17 23:58	1.3
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		3.6	ug/m3			09/22/17 23:58	1.3
Ethylbenzene	9.7		2.3	ug/m3			09/22/17 23:58	1.3
4-Ethyltoluene	ND		2.6	ug/m3			09/22/17 23:58	1.3
Hexachlorobutadiene	ND		28	ug/m3			09/22/17 23:58	1.3
2-Hexanone	ND		2.1	ug/m3			09/22/17 23:58	1.3
Methylene Chloride	ND		1.8	ug/m3			09/22/17 23:58	1.3
4-Methyl-2-pentanone (MIBK)	7.3		2.1	ug/m3			09/22/17 23:58	1.3
Styrene	ND		2.2	ug/m3			09/22/17 23:58	1.3
1,1,2,2-Tetrachloroethane	ND		3.6	ug/m3			09/22/17 23:58	1.3
Tetrachloroethene	220		3.5	ug/m3			09/22/17 23:58	1.3
Toluene	18		2.0	ug/m3			09/22/17 23:58	1.3
1,2,4-Trichlorobenzene	ND		19	ug/m3			09/22/17 23:58	1.3
1,1,1-Trichloroethane	ND		2.1	ug/m3			09/22/17 23:58	1.3
1,1,2-Trichloroethane	ND		2.8	ug/m3			09/22/17 23:58	1.3
Trichloroethene	5.3		2.8	ug/m3			09/22/17 23:58	1.3
Trichlorofluoromethane	ND		2.9	ug/m3			09/22/17 23:58	1.3
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	ug/m3			09/22/17 23:58	1.3
1,2,4-Trimethylbenzene	7.3		5.1	ug/m3			09/22/17 23:58	1.3
1,3,5-Trimethylbenzene	2.7		2.6	ug/m3			09/22/17 23:58	1.3
Vinyl acetate	ND		3.7	ug/m3			09/22/17 23:58	1.3
Vinyl chloride	ND		1.3	ug/m3			09/22/17 23:58	1.3
m,p-Xylene	40		4.5	ug/m3			09/22/17 23:58	1.3
o-Xylene	18		2.3	ug/m3			09/22/17 23:58	1.3
Naphthalene	ND		5.5	ug/m3			09/22/17 23:58	1.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130		09/22/17 23:58	1.3
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		09/22/17 23:58	1.3
Toluene-d8 (Surr)	100		70 - 130		09/22/17 23:58	1.3

Client Sample ID: G-170907-RA-22

Lab Sample ID: 320-31467-31

Date Collected: 09/07/17 12:26

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	18		5.0	ppb v/v			09/23/17 00:51	1
Benzene	ND		0.40	ppb v/v			09/23/17 00:51	1
Benzyl chloride	ND		0.80	ppb v/v			09/23/17 00:51	1
Bromodichloromethane	ND		0.30	ppb v/v			09/23/17 00:51	1
Bromoform	ND		0.40	ppb v/v			09/23/17 00:51	1
Bromomethane	ND		0.80	ppb v/v			09/23/17 00:51	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/23/17 00:51	1
Carbon disulfide	1.6		0.80	ppb v/v			09/23/17 00:51	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/23/17 00:51	1
Chlorobenzene	ND		0.30	ppb v/v			09/23/17 00:51	1
Dibromochloromethane	ND		0.40	ppb v/v			09/23/17 00:51	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-22

Lab Sample ID: 320-31467-31

Date Collected: 09/07/17 12:26

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.80	ppb v/v			09/23/17 00:51	1
Chloroform	ND		0.30	ppb v/v			09/23/17 00:51	1
Chloromethane	ND		0.80	ppb v/v			09/23/17 00:51	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/23/17 00:51	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 00:51	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 00:51	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 00:51	1
Dichlorodifluoromethane	11		0.40	ppb v/v			09/23/17 00:51	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/23/17 00:51	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/23/17 00:51	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/23/17 00:51	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/23/17 00:51	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/23/17 00:51	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/23/17 00:51	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/23/17 00:51	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/23/17 00:51	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/23/17 00:51	1
Ethylbenzene	ND		0.40	ppb v/v			09/23/17 00:51	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/23/17 00:51	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/23/17 00:51	1
2-Hexanone	ND		0.40	ppb v/v			09/23/17 00:51	1
Methylene Chloride	ND		0.40	ppb v/v			09/23/17 00:51	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/23/17 00:51	1
Styrene	ND		0.40	ppb v/v			09/23/17 00:51	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/23/17 00:51	1
Tetrachloroethene	0.53		0.40	ppb v/v			09/23/17 00:51	1
Toluene	0.87		0.40	ppb v/v			09/23/17 00:51	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/23/17 00:51	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/23/17 00:51	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/23/17 00:51	1
Trichloroethene	ND		0.40	ppb v/v			09/23/17 00:51	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/23/17 00:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/23/17 00:51	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/23/17 00:51	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/23/17 00:51	1
Vinyl acetate	ND		0.80	ppb v/v			09/23/17 00:51	1
Vinyl chloride	ND		0.40	ppb v/v			09/23/17 00:51	1
m,p-Xylene	ND		0.80	ppb v/v			09/23/17 00:51	1
o-Xylene	ND		0.40	ppb v/v			09/23/17 00:51	1
Naphthalene	ND		0.80	ppb v/v			09/23/17 00:51	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	43		12	ug/m3			09/23/17 00:51	1
Benzene	ND		1.3	ug/m3			09/23/17 00:51	1
Benzyl chloride	ND		4.1	ug/m3			09/23/17 00:51	1
Bromodichloromethane	ND		2.0	ug/m3			09/23/17 00:51	1
Bromoform	ND		4.1	ug/m3			09/23/17 00:51	1
Bromomethane	ND		3.1	ug/m3			09/23/17 00:51	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/23/17 00:51	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-22

Lab Sample ID: 320-31467-31

Date Collected: 09/07/17 12:26

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	5.0		2.5	ug/m3			09/23/17 00:51	1
Carbon tetrachloride	ND		5.0	ug/m3			09/23/17 00:51	1
Chlorobenzene	ND		1.4	ug/m3			09/23/17 00:51	1
Dibromochloromethane	ND		3.4	ug/m3			09/23/17 00:51	1
Chloroethane	ND		2.1	ug/m3			09/23/17 00:51	1
Chloroform	ND		1.5	ug/m3			09/23/17 00:51	1
Chloromethane	ND		1.7	ug/m3			09/23/17 00:51	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/23/17 00:51	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 00:51	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 00:51	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 00:51	1
Dichlorodifluoromethane	54		2.0	ug/m3			09/23/17 00:51	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/23/17 00:51	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/23/17 00:51	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/23/17 00:51	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/23/17 00:51	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/23/17 00:51	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/23/17 00:51	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/23/17 00:51	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/23/17 00:51	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/23/17 00:51	1
Ethylbenzene	ND		1.7	ug/m3			09/23/17 00:51	1
4-Ethyltoluene	ND		2.0	ug/m3			09/23/17 00:51	1
Hexachlorobutadiene	ND		21	ug/m3			09/23/17 00:51	1
2-Hexanone	ND		1.6	ug/m3			09/23/17 00:51	1
Methylene Chloride	ND		1.4	ug/m3			09/23/17 00:51	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/23/17 00:51	1
Styrene	ND		1.7	ug/m3			09/23/17 00:51	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/23/17 00:51	1
Tetrachloroethene	3.6		2.7	ug/m3			09/23/17 00:51	1
Toluene	3.3		1.5	ug/m3			09/23/17 00:51	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/23/17 00:51	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/23/17 00:51	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/23/17 00:51	1
Trichloroethene	ND		2.1	ug/m3			09/23/17 00:51	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/23/17 00:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/23/17 00:51	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/23/17 00:51	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/23/17 00:51	1
Vinyl acetate	ND		2.8	ug/m3			09/23/17 00:51	1
Vinyl chloride	ND		1.0	ug/m3			09/23/17 00:51	1
m,p-Xylene	ND		3.5	ug/m3			09/23/17 00:51	1
o-Xylene	ND		1.7	ug/m3			09/23/17 00:51	1
Naphthalene	ND		4.2	ug/m3			09/23/17 00:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130		09/23/17 00:51	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		09/23/17 00:51	1
Toluene-d8 (Surr)	100		70 - 130		09/23/17 00:51	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-23

Lab Sample ID: 320-31467-32

Date Collected: 09/07/17 12:31

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	9.7		5.0	ppb v/v			09/23/17 01:45	1
Benzene	ND		0.40	ppb v/v			09/23/17 01:45	1
Benzyl chloride	ND		0.80	ppb v/v			09/23/17 01:45	1
Bromodichloromethane	ND		0.30	ppb v/v			09/23/17 01:45	1
Bromoform	ND		0.40	ppb v/v			09/23/17 01:45	1
Bromomethane	ND		0.80	ppb v/v			09/23/17 01:45	1
2-Butanone (MEK)	1.1		0.80	ppb v/v			09/23/17 01:45	1
Carbon disulfide	4.3		0.80	ppb v/v			09/23/17 01:45	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/23/17 01:45	1
Chlorobenzene	ND		0.30	ppb v/v			09/23/17 01:45	1
Dibromochloromethane	ND		0.40	ppb v/v			09/23/17 01:45	1
Chloroethane	ND		0.80	ppb v/v			09/23/17 01:45	1
Chloroform	0.56		0.30	ppb v/v			09/23/17 01:45	1
Chloromethane	ND		0.80	ppb v/v			09/23/17 01:45	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/23/17 01:45	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 01:45	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 01:45	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 01:45	1
Dichlorodifluoromethane	41		0.40	ppb v/v			09/23/17 01:45	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/23/17 01:45	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/23/17 01:45	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/23/17 01:45	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/23/17 01:45	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/23/17 01:45	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/23/17 01:45	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/23/17 01:45	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/23/17 01:45	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/23/17 01:45	1
Ethylbenzene	ND		0.40	ppb v/v			09/23/17 01:45	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/23/17 01:45	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/23/17 01:45	1
2-Hexanone	ND		0.40	ppb v/v			09/23/17 01:45	1
Methylene Chloride	0.54		0.40	ppb v/v			09/23/17 01:45	1
4-Methyl-2-pentanone (MIBK)	0.43		0.40	ppb v/v			09/23/17 01:45	1
Styrene	ND		0.40	ppb v/v			09/23/17 01:45	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/23/17 01:45	1
Tetrachloroethene	26		0.40	ppb v/v			09/23/17 01:45	1
Toluene	0.50		0.40	ppb v/v			09/23/17 01:45	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/23/17 01:45	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/23/17 01:45	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/23/17 01:45	1
Trichloroethene	3.7		0.40	ppb v/v			09/23/17 01:45	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/23/17 01:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/23/17 01:45	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/23/17 01:45	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/23/17 01:45	1
Vinyl acetate	ND		0.80	ppb v/v			09/23/17 01:45	1
Vinyl chloride	ND		0.40	ppb v/v			09/23/17 01:45	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-23

Lab Sample ID: 320-31467-32

Date Collected: 09/07/17 12:31

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	ND		0.80	ppb v/v			09/23/17 01:45	1
o-Xylene	ND		0.40	ppb v/v			09/23/17 01:45	1
Naphthalene	ND		0.80	ppb v/v			09/23/17 01:45	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	23		12	ug/m3			09/23/17 01:45	1
Benzene	ND		1.3	ug/m3			09/23/17 01:45	1
Benzyl chloride	ND		4.1	ug/m3			09/23/17 01:45	1
Bromodichloromethane	ND		2.0	ug/m3			09/23/17 01:45	1
Bromoform	ND		4.1	ug/m3			09/23/17 01:45	1
Bromomethane	ND		3.1	ug/m3			09/23/17 01:45	1
2-Butanone (MEK)	3.1		2.4	ug/m3			09/23/17 01:45	1
Carbon disulfide	13		2.5	ug/m3			09/23/17 01:45	1
Carbon tetrachloride	ND		5.0	ug/m3			09/23/17 01:45	1
Chlorobenzene	ND		1.4	ug/m3			09/23/17 01:45	1
Dibromochloromethane	ND		3.4	ug/m3			09/23/17 01:45	1
Chloroethane	ND		2.1	ug/m3			09/23/17 01:45	1
Chloroform	2.8		1.5	ug/m3			09/23/17 01:45	1
Chloromethane	ND		1.7	ug/m3			09/23/17 01:45	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/23/17 01:45	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 01:45	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 01:45	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 01:45	1
Dichlorodifluoromethane	200		2.0	ug/m3			09/23/17 01:45	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/23/17 01:45	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/23/17 01:45	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/23/17 01:45	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/23/17 01:45	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/23/17 01:45	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/23/17 01:45	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/23/17 01:45	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/23/17 01:45	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/23/17 01:45	1
Ethylbenzene	ND		1.7	ug/m3			09/23/17 01:45	1
4-Ethyltoluene	ND		2.0	ug/m3			09/23/17 01:45	1
Hexachlorobutadiene	ND		21	ug/m3			09/23/17 01:45	1
2-Hexanone	ND		1.6	ug/m3			09/23/17 01:45	1
Methylene Chloride	1.9		1.4	ug/m3			09/23/17 01:45	1
4-Methyl-2-pentanone (MIBK)	1.8		1.6	ug/m3			09/23/17 01:45	1
Styrene	ND		1.7	ug/m3			09/23/17 01:45	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/23/17 01:45	1
Tetrachloroethene	170		2.7	ug/m3			09/23/17 01:45	1
Toluene	1.9		1.5	ug/m3			09/23/17 01:45	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/23/17 01:45	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/23/17 01:45	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/23/17 01:45	1
Trichloroethene	20		2.1	ug/m3			09/23/17 01:45	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/23/17 01:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/23/17 01:45	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-23

Lab Sample ID: 320-31467-32

Date Collected: 09/07/17 12:31

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/23/17 01:45	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/23/17 01:45	1
Vinyl acetate	ND		2.8	ug/m3			09/23/17 01:45	1
Vinyl chloride	ND		1.0	ug/m3			09/23/17 01:45	1
m,p-Xylene	ND		3.5	ug/m3			09/23/17 01:45	1
o-Xylene	ND		1.7	ug/m3			09/23/17 01:45	1
Naphthalene	ND		4.2	ug/m3			09/23/17 01:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130				09/23/17 01:45	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130				09/23/17 01:45	1
Toluene-d8 (Surr)	101		70 - 130				09/23/17 01:45	1

Client Sample ID: G-170907-RA-24

Lab Sample ID: 320-31467-33

Date Collected: 09/07/17 12:32

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	11		5.0	ppb v/v			09/22/17 19:16	1
Benzene	ND		0.40	ppb v/v			09/22/17 19:16	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 19:16	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 19:16	1
Bromoform	ND		0.40	ppb v/v			09/22/17 19:16	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 19:16	1
2-Butanone (MEK)	1.0		0.80	ppb v/v			09/22/17 19:16	1
Carbon disulfide	27		0.80	ppb v/v			09/22/17 19:16	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 19:16	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 19:16	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 19:16	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 19:16	1
Chloroform	0.59		0.30	ppb v/v			09/22/17 19:16	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 19:16	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 19:16	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 19:16	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 19:16	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 19:16	1
Dichlorodifluoromethane	15		0.40	ppb v/v			09/22/17 19:16	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 19:16	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 19:16	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 19:16	1
cis-1,2-Dichloroethene	0.44		0.40	ppb v/v			09/22/17 19:16	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 19:16	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 19:16	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 19:16	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 19:16	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 19:16	1
Ethylbenzene	0.79		0.40	ppb v/v			09/22/17 19:16	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-24

Lab Sample ID: 320-31467-33

Date Collected: 09/07/17 12:32

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 19:16	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 19:16	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 19:16	1
Methylene Chloride	0.62		0.40	ppb v/v			09/22/17 19:16	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 19:16	1
Styrene	ND		0.40	ppb v/v			09/22/17 19:16	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 19:16	1
Tetrachloroethene	44		0.40	ppb v/v			09/22/17 19:16	1
Toluene	2.9		0.40	ppb v/v			09/22/17 19:16	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 19:16	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 19:16	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 19:16	1
Trichloroethene	1.4		0.40	ppb v/v			09/22/17 19:16	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/22/17 19:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 19:16	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 19:16	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 19:16	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 19:16	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 19:16	1
m,p-Xylene	1.4		0.80	ppb v/v			09/22/17 19:16	1
o-Xylene	0.52		0.40	ppb v/v			09/22/17 19:16	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 19:16	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	25		12	ug/m3			09/22/17 19:16	1
Benzene	ND		1.3	ug/m3			09/22/17 19:16	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 19:16	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 19:16	1
Bromoform	ND		4.1	ug/m3			09/22/17 19:16	1
Bromomethane	ND		3.1	ug/m3			09/22/17 19:16	1
2-Butanone (MEK)	3.1		2.4	ug/m3			09/22/17 19:16	1
Carbon disulfide	85		2.5	ug/m3			09/22/17 19:16	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 19:16	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 19:16	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 19:16	1
Chloroethane	ND		2.1	ug/m3			09/22/17 19:16	1
Chloroform	2.9		1.5	ug/m3			09/22/17 19:16	1
Chloromethane	ND		1.7	ug/m3			09/22/17 19:16	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 19:16	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 19:16	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 19:16	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 19:16	1
Dichlorodifluoromethane	73		2.0	ug/m3			09/22/17 19:16	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 19:16	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 19:16	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 19:16	1
cis-1,2-Dichloroethene	1.7		1.6	ug/m3			09/22/17 19:16	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 19:16	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 19:16	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-24

Lab Sample ID: 320-31467-33

Date Collected: 09/07/17 12:32

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 19:16	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 19:16	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 19:16	1
Ethylbenzene	3.4		1.7	ug/m3			09/22/17 19:16	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 19:16	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 19:16	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 19:16	1
Methylene Chloride	2.1		1.4	ug/m3			09/22/17 19:16	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 19:16	1
Styrene	ND		1.7	ug/m3			09/22/17 19:16	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 19:16	1
Tetrachloroethene	300		2.7	ug/m3			09/22/17 19:16	1
Toluene	11		1.5	ug/m3			09/22/17 19:16	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 19:16	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 19:16	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 19:16	1
Trichloroethene	7.4		2.1	ug/m3			09/22/17 19:16	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/22/17 19:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 19:16	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 19:16	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 19:16	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 19:16	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 19:16	1
m,p-Xylene	6.2		3.5	ug/m3			09/22/17 19:16	1
o-Xylene	2.3		1.7	ug/m3			09/22/17 19:16	1
Naphthalene	ND		4.2	ug/m3			09/22/17 19:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130				09/22/17 19:16	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 130				09/22/17 19:16	1
Toluene-d8 (Surr)	116		70 - 130				09/22/17 19:16	1

Client Sample ID: G-170907-RA-25

Lab Sample ID: 320-31467-34

Date Collected: 09/07/17 13:24

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	7.3		5.0	ppb v/v			09/22/17 20:16	1
Benzene	ND		0.40	ppb v/v			09/22/17 20:16	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 20:16	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 20:16	1
Bromoform	ND		0.40	ppb v/v			09/22/17 20:16	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 20:16	1
2-Butanone (MEK)	12		0.80	ppb v/v			09/22/17 20:16	1
Carbon disulfide	4.1		0.80	ppb v/v			09/22/17 20:16	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 20:16	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 20:16	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-25

Lab Sample ID: 320-31467-34

Date Collected: 09/07/17 13:24

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 20:16	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 20:16	1
Chloroform	0.45		0.30	ppb v/v			09/22/17 20:16	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 20:16	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 20:16	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 20:16	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 20:16	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 20:16	1
Dichlorodifluoromethane	ND		0.40	ppb v/v			09/22/17 20:16	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 20:16	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 20:16	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 20:16	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 20:16	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 20:16	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 20:16	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 20:16	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 20:16	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 20:16	1
Ethylbenzene	0.50		0.40	ppb v/v			09/22/17 20:16	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 20:16	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 20:16	1
2-Hexanone	0.71		0.40	ppb v/v			09/22/17 20:16	1
Methylene Chloride	ND		0.40	ppb v/v			09/22/17 20:16	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 20:16	1
Styrene	ND		0.40	ppb v/v			09/22/17 20:16	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 20:16	1
Tetrachloroethene	9.3		0.40	ppb v/v			09/22/17 20:16	1
Toluene	1.6		0.40	ppb v/v			09/22/17 20:16	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 20:16	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 20:16	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 20:16	1
Trichloroethene	1.3		0.40	ppb v/v			09/22/17 20:16	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/22/17 20:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 20:16	1
1,2,4-Trimethylbenzene	0.85		0.80	ppb v/v			09/22/17 20:16	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 20:16	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 20:16	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 20:16	1
m,p-Xylene	2.1		0.80	ppb v/v			09/22/17 20:16	1
o-Xylene	0.84		0.40	ppb v/v			09/22/17 20:16	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 20:16	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	17		12	ug/m3			09/22/17 20:16	1
Benzene	ND		1.3	ug/m3			09/22/17 20:16	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 20:16	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 20:16	1
Bromoform	ND		4.1	ug/m3			09/22/17 20:16	1
Bromomethane	ND		3.1	ug/m3			09/22/17 20:16	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-25

Lab Sample ID: 320-31467-34

Date Collected: 09/07/17 13:24

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	37		2.4	ug/m3			09/22/17 20:16	1
Carbon disulfide	13		2.5	ug/m3			09/22/17 20:16	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 20:16	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 20:16	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 20:16	1
Chloroethane	ND		2.1	ug/m3			09/22/17 20:16	1
Chloroform	2.2		1.5	ug/m3			09/22/17 20:16	1
Chloromethane	ND		1.7	ug/m3			09/22/17 20:16	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 20:16	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 20:16	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 20:16	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 20:16	1
Dichlorodifluoromethane	ND		2.0	ug/m3			09/22/17 20:16	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 20:16	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 20:16	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 20:16	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 20:16	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 20:16	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 20:16	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 20:16	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 20:16	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 20:16	1
Ethylbenzene	2.2		1.7	ug/m3			09/22/17 20:16	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 20:16	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 20:16	1
2-Hexanone	2.9		1.6	ug/m3			09/22/17 20:16	1
Methylene Chloride	ND		1.4	ug/m3			09/22/17 20:16	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 20:16	1
Styrene	ND		1.7	ug/m3			09/22/17 20:16	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 20:16	1
Tetrachloroethene	63		2.7	ug/m3			09/22/17 20:16	1
Toluene	6.0		1.5	ug/m3			09/22/17 20:16	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 20:16	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 20:16	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 20:16	1
Trichloroethene	6.8		2.1	ug/m3			09/22/17 20:16	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/22/17 20:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 20:16	1
1,2,4-Trimethylbenzene	4.2		3.9	ug/m3			09/22/17 20:16	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 20:16	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 20:16	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 20:16	1
m,p-Xylene	9.3		3.5	ug/m3			09/22/17 20:16	1
o-Xylene	3.7		1.7	ug/m3			09/22/17 20:16	1
Naphthalene	ND		4.2	ug/m3			09/22/17 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130		09/22/17 20:16	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		09/22/17 20:16	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-25

Lab Sample ID: 320-31467-34

Date Collected: 09/07/17 13:24

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	114		70 - 130		09/22/17 20:16	1

Client Sample ID: G-170907-RA-26

Lab Sample ID: 320-31467-35

Date Collected: 09/07/17 13:23

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	7.5		5.0	ppb v/v			09/22/17 21:14	1
Benzene	ND		0.40	ppb v/v			09/22/17 21:14	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 21:14	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 21:14	1
Bromoform	ND		0.40	ppb v/v			09/22/17 21:14	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 21:14	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/22/17 21:14	1
Carbon disulfide	18		0.80	ppb v/v			09/22/17 21:14	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 21:14	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 21:14	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 21:14	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 21:14	1
Chloroform	0.51		0.30	ppb v/v			09/22/17 21:14	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 21:14	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 21:14	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 21:14	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 21:14	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 21:14	1
Dichlorodifluoromethane	1.1		0.40	ppb v/v			09/22/17 21:14	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 21:14	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 21:14	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 21:14	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 21:14	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 21:14	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 21:14	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 21:14	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 21:14	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 21:14	1
Ethylbenzene	ND		0.40	ppb v/v			09/22/17 21:14	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 21:14	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 21:14	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 21:14	1
Methylene Chloride	ND		0.40	ppb v/v			09/22/17 21:14	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 21:14	1
Styrene	ND		0.40	ppb v/v			09/22/17 21:14	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 21:14	1
Tetrachloroethene	ND		0.40	ppb v/v			09/22/17 21:14	1
Toluene	ND		0.40	ppb v/v			09/22/17 21:14	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 21:14	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-26

Lab Sample ID: 320-31467-35

Date Collected: 09/07/17 13:23

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 21:14	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 21:14	1
Trichloroethene	ND		0.40	ppb v/v			09/22/17 21:14	1
Trichlorofluoromethane	1.2		0.40	ppb v/v			09/22/17 21:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 21:14	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 21:14	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 21:14	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 21:14	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 21:14	1
m,p-Xylene	ND		0.80	ppb v/v			09/22/17 21:14	1
o-Xylene	ND		0.40	ppb v/v			09/22/17 21:14	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 21:14	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	18		12	ug/m3			09/22/17 21:14	1
Benzene	ND		1.3	ug/m3			09/22/17 21:14	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 21:14	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 21:14	1
Bromoform	ND		4.1	ug/m3			09/22/17 21:14	1
Bromomethane	ND		3.1	ug/m3			09/22/17 21:14	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/22/17 21:14	1
Carbon disulfide	55		2.5	ug/m3			09/22/17 21:14	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 21:14	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 21:14	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 21:14	1
Chloroethane	ND		2.1	ug/m3			09/22/17 21:14	1
Chloroform	2.5		1.5	ug/m3			09/22/17 21:14	1
Chloromethane	ND		1.7	ug/m3			09/22/17 21:14	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 21:14	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 21:14	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 21:14	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 21:14	1
Dichlorodifluoromethane	5.5		2.0	ug/m3			09/22/17 21:14	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 21:14	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 21:14	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 21:14	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 21:14	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 21:14	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 21:14	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 21:14	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 21:14	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 21:14	1
Ethylbenzene	ND		1.7	ug/m3			09/22/17 21:14	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 21:14	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 21:14	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 21:14	1
Methylene Chloride	ND		1.4	ug/m3			09/22/17 21:14	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 21:14	1
Styrene	ND		1.7	ug/m3			09/22/17 21:14	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-26

Lab Sample ID: 320-31467-35

Date Collected: 09/07/17 13:23

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 21:14	1
Tetrachloroethene	ND		2.7	ug/m3			09/22/17 21:14	1
Toluene	ND		1.5	ug/m3			09/22/17 21:14	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 21:14	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 21:14	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 21:14	1
Trichloroethene	ND		2.1	ug/m3			09/22/17 21:14	1
Trichlorofluoromethane	6.8		2.2	ug/m3			09/22/17 21:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 21:14	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 21:14	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 21:14	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 21:14	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 21:14	1
m,p-Xylene	ND		3.5	ug/m3			09/22/17 21:14	1
o-Xylene	ND		1.7	ug/m3			09/22/17 21:14	1
Naphthalene	ND		4.2	ug/m3			09/22/17 21:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130		09/22/17 21:14	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 130		09/22/17 21:14	1
Toluene-d8 (Surr)	114		70 - 130		09/22/17 21:14	1

Client Sample ID: G-170907-RA-27

Lab Sample ID: 320-31467-36

Date Collected: 09/07/17 13:25

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	9.9		8.1	ppb v/v			09/22/17 22:11	1.61
Benzene	ND		0.64	ppb v/v			09/22/17 22:11	1.61
Benzyl chloride	ND		1.3	ppb v/v			09/22/17 22:11	1.61
Bromodichloromethane	ND		0.48	ppb v/v			09/22/17 22:11	1.61
Bromoform	ND		0.64	ppb v/v			09/22/17 22:11	1.61
Bromomethane	ND		1.3	ppb v/v			09/22/17 22:11	1.61
2-Butanone (MEK)	24		1.3	ppb v/v			09/22/17 22:11	1.61
Carbon disulfide	5.0		1.3	ppb v/v			09/22/17 22:11	1.61
Carbon tetrachloride	ND		1.3	ppb v/v			09/22/17 22:11	1.61
Chlorobenzene	ND		0.48	ppb v/v			09/22/17 22:11	1.61
Dibromochloromethane	ND		0.64	ppb v/v			09/22/17 22:11	1.61
Chloroethane	ND		1.3	ppb v/v			09/22/17 22:11	1.61
Chloroform	0.96		0.48	ppb v/v			09/22/17 22:11	1.61
Chloromethane	ND		1.3	ppb v/v			09/22/17 22:11	1.61
1,2-Dibromoethane (EDB)	ND		1.3	ppb v/v			09/22/17 22:11	1.61
1,2-Dichlorobenzene	ND		0.64	ppb v/v			09/22/17 22:11	1.61
1,3-Dichlorobenzene	ND		0.64	ppb v/v			09/22/17 22:11	1.61
1,4-Dichlorobenzene	ND		0.64	ppb v/v			09/22/17 22:11	1.61
Dichlorodifluoromethane	3.8		0.64	ppb v/v			09/22/17 22:11	1.61
1,1-Dichloroethane	ND		0.48	ppb v/v			09/22/17 22:11	1.61

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-27

Lab Sample ID: 320-31467-36

Date Collected: 09/07/17 13:25

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.3	ppb v/v			09/22/17 22:11	1.61
1,1-Dichloroethene	ND		1.3	ppb v/v			09/22/17 22:11	1.61
cis-1,2-Dichloroethene	ND		0.64	ppb v/v			09/22/17 22:11	1.61
trans-1,2-Dichloroethene	ND		0.64	ppb v/v			09/22/17 22:11	1.61
1,2-Dichloropropane	ND		0.64	ppb v/v			09/22/17 22:11	1.61
cis-1,3-Dichloropropene	ND		0.64	ppb v/v			09/22/17 22:11	1.61
trans-1,3-Dichloropropene	ND		0.64	ppb v/v			09/22/17 22:11	1.61
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.64	ppb v/v			09/22/17 22:11	1.61
Ethylbenzene	0.74		0.64	ppb v/v			09/22/17 22:11	1.61
4-Ethyltoluene	ND		0.64	ppb v/v			09/22/17 22:11	1.61
Hexachlorobutadiene	ND		3.2	ppb v/v			09/22/17 22:11	1.61
2-Hexanone	1.2		0.64	ppb v/v			09/22/17 22:11	1.61
Methylene Chloride	0.74		0.64	ppb v/v			09/22/17 22:11	1.61
4-Methyl-2-pentanone (MIBK)	0.82		0.64	ppb v/v			09/22/17 22:11	1.61
Styrene	ND		0.64	ppb v/v			09/22/17 22:11	1.61
1,1,2,2-Tetrachloroethane	ND		0.64	ppb v/v			09/22/17 22:11	1.61
Tetrachloroethene	59		0.64	ppb v/v			09/22/17 22:11	1.61
Toluene	2.9		0.64	ppb v/v			09/22/17 22:11	1.61
1,2,4-Trichlorobenzene	ND		3.2	ppb v/v			09/22/17 22:11	1.61
1,1,1-Trichloroethane	1.1		0.48	ppb v/v			09/22/17 22:11	1.61
1,1,2-Trichloroethane	ND		0.64	ppb v/v			09/22/17 22:11	1.61
Trichloroethene	1.6		0.64	ppb v/v			09/22/17 22:11	1.61
Trichlorofluoromethane	1.1		0.64	ppb v/v			09/22/17 22:11	1.61
1,1,2-Trichloro-1,2,2-trifluoroethane	0.98		0.64	ppb v/v			09/22/17 22:11	1.61
1,2,4-Trimethylbenzene	ND		1.3	ppb v/v			09/22/17 22:11	1.61
1,3,5-Trimethylbenzene	ND		0.64	ppb v/v			09/22/17 22:11	1.61
Vinyl acetate	ND		1.3	ppb v/v			09/22/17 22:11	1.61
Vinyl chloride	ND		0.64	ppb v/v			09/22/17 22:11	1.61
m,p-Xylene	2.9		1.3	ppb v/v			09/22/17 22:11	1.61
o-Xylene	1.1		0.64	ppb v/v			09/22/17 22:11	1.61
Naphthalene	ND		1.3	ppb v/v			09/22/17 22:11	1.61
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	23		19	ug/m3			09/22/17 22:11	1.61
Benzene	ND		2.1	ug/m3			09/22/17 22:11	1.61
Benzyl chloride	ND		6.7	ug/m3			09/22/17 22:11	1.61
Bromodichloromethane	ND		3.2	ug/m3			09/22/17 22:11	1.61
Bromoform	ND		6.7	ug/m3			09/22/17 22:11	1.61
Bromomethane	ND		5.0	ug/m3			09/22/17 22:11	1.61
2-Butanone (MEK)	70		3.8	ug/m3			09/22/17 22:11	1.61
Carbon disulfide	16		4.0	ug/m3			09/22/17 22:11	1.61
Carbon tetrachloride	ND		8.1	ug/m3			09/22/17 22:11	1.61
Chlorobenzene	ND		2.2	ug/m3			09/22/17 22:11	1.61
Dibromochloromethane	ND		5.5	ug/m3			09/22/17 22:11	1.61
Chloroethane	ND		3.4	ug/m3			09/22/17 22:11	1.61
Chloroform	4.7		2.4	ug/m3			09/22/17 22:11	1.61
Chloromethane	ND		2.7	ug/m3			09/22/17 22:11	1.61
1,2-Dibromoethane (EDB)	ND		9.9	ug/m3			09/22/17 22:11	1.61

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-27

Lab Sample ID: 320-31467-36

Date Collected: 09/07/17 13:25

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		3.9	ug/m3			09/22/17 22:11	1.61
1,3-Dichlorobenzene	ND		3.9	ug/m3			09/22/17 22:11	1.61
1,4-Dichlorobenzene	ND		3.9	ug/m3			09/22/17 22:11	1.61
Dichlorodifluoromethane	19		3.2	ug/m3			09/22/17 22:11	1.61
1,1-Dichloroethane	ND		2.0	ug/m3			09/22/17 22:11	1.61
1,2-Dichloroethane	ND		5.2	ug/m3			09/22/17 22:11	1.61
1,1-Dichloroethene	ND		5.1	ug/m3			09/22/17 22:11	1.61
cis-1,2-Dichloroethene	ND		2.6	ug/m3			09/22/17 22:11	1.61
trans-1,2-Dichloroethene	ND		2.6	ug/m3			09/22/17 22:11	1.61
1,2-Dichloropropane	ND		3.0	ug/m3			09/22/17 22:11	1.61
cis-1,3-Dichloropropene	ND		2.9	ug/m3			09/22/17 22:11	1.61
trans-1,3-Dichloropropene	ND		2.9	ug/m3			09/22/17 22:11	1.61
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		4.5	ug/m3			09/22/17 22:11	1.61
Ethylbenzene	3.2		2.8	ug/m3			09/22/17 22:11	1.61
4-Ethyltoluene	ND		3.2	ug/m3			09/22/17 22:11	1.61
Hexachlorobutadiene	ND		34	ug/m3			09/22/17 22:11	1.61
2-Hexanone	4.8		2.6	ug/m3			09/22/17 22:11	1.61
Methylene Chloride	2.6		2.2	ug/m3			09/22/17 22:11	1.61
4-Methyl-2-pentanone (MIBK)	3.3		2.6	ug/m3			09/22/17 22:11	1.61
Styrene	ND		2.7	ug/m3			09/22/17 22:11	1.61
1,1,2,2-Tetrachloroethane	ND		4.4	ug/m3			09/22/17 22:11	1.61
Tetrachloroethene	400		4.4	ug/m3			09/22/17 22:11	1.61
Toluene	11		2.4	ug/m3			09/22/17 22:11	1.61
1,2,4-Trichlorobenzene	ND		24	ug/m3			09/22/17 22:11	1.61
1,1,1-Trichloroethane	6.2		2.6	ug/m3			09/22/17 22:11	1.61
1,1,2-Trichloroethane	ND		3.5	ug/m3			09/22/17 22:11	1.61
Trichloroethene	8.7		3.5	ug/m3			09/22/17 22:11	1.61
Trichlorofluoromethane	6.1		3.6	ug/m3			09/22/17 22:11	1.61
1,1,2-Trichloro-1,2,2-trifluoroethane	7.5		4.9	ug/m3			09/22/17 22:11	1.61
1,2,4-Trimethylbenzene	ND		6.3	ug/m3			09/22/17 22:11	1.61
1,3,5-Trimethylbenzene	ND		3.2	ug/m3			09/22/17 22:11	1.61
Vinyl acetate	ND		4.5	ug/m3			09/22/17 22:11	1.61
Vinyl chloride	ND		1.6	ug/m3			09/22/17 22:11	1.61
m,p-Xylene	12		5.6	ug/m3			09/22/17 22:11	1.61
o-Xylene	4.6		2.8	ug/m3			09/22/17 22:11	1.61
Naphthalene	ND		6.8	ug/m3			09/22/17 22:11	1.61

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130		09/22/17 22:11	1.61
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		09/22/17 22:11	1.61
Toluene-d8 (Surr)	112		70 - 130		09/22/17 22:11	1.61

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-28

Lab Sample ID: 320-31467-37

Date Collected: 09/07/17 13:24

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		21	ppb v/v			09/22/17 23:02	4.28
Benzene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Benzyl chloride	ND		3.4	ppb v/v			09/22/17 23:02	4.28
Bromodichloromethane	ND		1.3	ppb v/v			09/22/17 23:02	4.28
Bromoform	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Bromomethane	ND		3.4	ppb v/v			09/22/17 23:02	4.28
2-Butanone (MEK)	16		3.4	ppb v/v			09/22/17 23:02	4.28
Carbon disulfide	5.4		3.4	ppb v/v			09/22/17 23:02	4.28
Carbon tetrachloride	ND		3.4	ppb v/v			09/22/17 23:02	4.28
Chlorobenzene	ND		1.3	ppb v/v			09/22/17 23:02	4.28
Dibromochloromethane	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Chloroethane	ND		3.4	ppb v/v			09/22/17 23:02	4.28
Chloroform	ND		1.3	ppb v/v			09/22/17 23:02	4.28
Chloromethane	ND		3.4	ppb v/v			09/22/17 23:02	4.28
1,2-Dibromoethane (EDB)	ND		3.4	ppb v/v			09/22/17 23:02	4.28
1,2-Dichlorobenzene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
1,3-Dichlorobenzene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
1,4-Dichlorobenzene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Dichlorodifluoromethane	14		1.7	ppb v/v			09/22/17 23:02	4.28
1,1-Dichloroethane	ND		1.3	ppb v/v			09/22/17 23:02	4.28
1,2-Dichloroethane	ND		3.4	ppb v/v			09/22/17 23:02	4.28
1,1-Dichloroethene	ND		3.4	ppb v/v			09/22/17 23:02	4.28
cis-1,2-Dichloroethene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
trans-1,2-Dichloroethene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
1,2-Dichloropropane	ND		1.7	ppb v/v			09/22/17 23:02	4.28
cis-1,3-Dichloropropene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
trans-1,3-Dichloropropene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Ethylbenzene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
4-Ethyltoluene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Hexachlorobutadiene	ND		8.6	ppb v/v			09/22/17 23:02	4.28
2-Hexanone	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Methylene Chloride	ND		1.7	ppb v/v			09/22/17 23:02	4.28
4-Methyl-2-pentanone (MIBK)	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Styrene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
1,1,2,2-Tetrachloroethane	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Tetrachloroethene	220		1.7	ppb v/v			09/22/17 23:02	4.28
Toluene	5.4		1.7	ppb v/v			09/22/17 23:02	4.28
1,2,4-Trichlorobenzene	ND		8.6	ppb v/v			09/22/17 23:02	4.28
1,1,1-Trichloroethane	2.3		1.3	ppb v/v			09/22/17 23:02	4.28
1,1,2-Trichloroethane	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Trichloroethene	2.1		1.7	ppb v/v			09/22/17 23:02	4.28
Trichlorofluoromethane	ND		1.7	ppb v/v			09/22/17 23:02	4.28
1,1,2-Trichloro-1,2,2-trifluoroethane	2.3		1.7	ppb v/v			09/22/17 23:02	4.28
1,2,4-Trimethylbenzene	ND		3.4	ppb v/v			09/22/17 23:02	4.28
1,3,5-Trimethylbenzene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Vinyl acetate	ND		3.4	ppb v/v			09/22/17 23:02	4.28
Vinyl chloride	ND		1.7	ppb v/v			09/22/17 23:02	4.28

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-28

Lab Sample ID: 320-31467-37

Date Collected: 09/07/17 13:24

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	ND		3.4	ppb v/v			09/22/17 23:02	4.28
o-Xylene	ND		1.7	ppb v/v			09/22/17 23:02	4.28
Naphthalene	ND		3.4	ppb v/v			09/22/17 23:02	4.28
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		51	ug/m3			09/22/17 23:02	4.28
Benzene	ND		5.5	ug/m3			09/22/17 23:02	4.28
Benzyl chloride	ND		18	ug/m3			09/22/17 23:02	4.28
Bromodichloromethane	ND		8.6	ug/m3			09/22/17 23:02	4.28
Bromoform	ND		18	ug/m3			09/22/17 23:02	4.28
Bromomethane	ND		13	ug/m3			09/22/17 23:02	4.28
2-Butanone (MEK)	47		10	ug/m3			09/22/17 23:02	4.28
Carbon disulfide	17		11	ug/m3			09/22/17 23:02	4.28
Carbon tetrachloride	ND		22	ug/m3			09/22/17 23:02	4.28
Chlorobenzene	ND		5.9	ug/m3			09/22/17 23:02	4.28
Dibromochloromethane	ND		15	ug/m3			09/22/17 23:02	4.28
Chloroethane	ND		9.0	ug/m3			09/22/17 23:02	4.28
Chloroform	ND		6.3	ug/m3			09/22/17 23:02	4.28
Chloromethane	ND		7.1	ug/m3			09/22/17 23:02	4.28
1,2-Dibromoethane (EDB)	ND		26	ug/m3			09/22/17 23:02	4.28
1,2-Dichlorobenzene	ND		10	ug/m3			09/22/17 23:02	4.28
1,3-Dichlorobenzene	ND		10	ug/m3			09/22/17 23:02	4.28
1,4-Dichlorobenzene	ND		10	ug/m3			09/22/17 23:02	4.28
Dichlorodifluoromethane	70		8.5	ug/m3			09/22/17 23:02	4.28
1,1-Dichloroethane	ND		5.2	ug/m3			09/22/17 23:02	4.28
1,2-Dichloroethane	ND		14	ug/m3			09/22/17 23:02	4.28
1,1-Dichloroethene	ND		14	ug/m3			09/22/17 23:02	4.28
cis-1,2-Dichloroethene	ND		6.8	ug/m3			09/22/17 23:02	4.28
trans-1,2-Dichloroethene	ND		6.8	ug/m3			09/22/17 23:02	4.28
1,2-Dichloropropane	ND		7.9	ug/m3			09/22/17 23:02	4.28
cis-1,3-Dichloropropene	ND		7.8	ug/m3			09/22/17 23:02	4.28
trans-1,3-Dichloropropene	ND		7.8	ug/m3			09/22/17 23:02	4.28
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		12	ug/m3			09/22/17 23:02	4.28
Ethylbenzene	ND		7.4	ug/m3			09/22/17 23:02	4.28
4-Ethyltoluene	ND		8.4	ug/m3			09/22/17 23:02	4.28
Hexachlorobutadiene	ND		91	ug/m3			09/22/17 23:02	4.28
2-Hexanone	ND		7.0	ug/m3			09/22/17 23:02	4.28
Methylene Chloride	ND		5.9	ug/m3			09/22/17 23:02	4.28
4-Methyl-2-pentanone (MIBK)	ND		7.0	ug/m3			09/22/17 23:02	4.28
Styrene	ND		7.3	ug/m3			09/22/17 23:02	4.28
1,1,2,2-Tetrachloroethane	ND		12	ug/m3			09/22/17 23:02	4.28
Tetrachloroethene	1500		12	ug/m3			09/22/17 23:02	4.28
Toluene	20		6.5	ug/m3			09/22/17 23:02	4.28
1,2,4-Trichlorobenzene	ND		64	ug/m3			09/22/17 23:02	4.28
1,1,1-Trichloroethane	13		7.0	ug/m3			09/22/17 23:02	4.28
1,1,2-Trichloroethane	ND		9.3	ug/m3			09/22/17 23:02	4.28
Trichloroethene	11		9.2	ug/m3			09/22/17 23:02	4.28
Trichlorofluoromethane	ND		9.6	ug/m3			09/22/17 23:02	4.28

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-28

Lab Sample ID: 320-31467-37

Date Collected: 09/07/17 13:24

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	17		13	ug/m3			09/22/17 23:02	4.28
1,2,4-Trimethylbenzene	ND		17	ug/m3			09/22/17 23:02	4.28
1,3,5-Trimethylbenzene	ND		8.4	ug/m3			09/22/17 23:02	4.28
Vinyl acetate	ND		12	ug/m3			09/22/17 23:02	4.28
Vinyl chloride	ND		4.4	ug/m3			09/22/17 23:02	4.28
m,p-Xylene	ND		15	ug/m3			09/22/17 23:02	4.28
o-Xylene	ND		7.4	ug/m3			09/22/17 23:02	4.28
Naphthalene	ND		18	ug/m3			09/22/17 23:02	4.28
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130				09/22/17 23:02	4.28
1,2-Dichloroethane-d4 (Surr)	99		70 - 130				09/22/17 23:02	4.28
Toluene-d8 (Surr)	110		70 - 130				09/22/17 23:02	4.28

Client Sample ID: G-170907-RA-29

Lab Sample ID: 320-31467-38

Date Collected: 09/07/17 13:34

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		11	ppb v/v			09/22/17 23:56	2.26
Benzene	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Benzyl chloride	ND		1.8	ppb v/v			09/22/17 23:56	2.26
Bromodichloromethane	ND		0.68	ppb v/v			09/22/17 23:56	2.26
Bromoform	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Bromomethane	ND		1.8	ppb v/v			09/22/17 23:56	2.26
2-Butanone (MEK)	3.1		1.8	ppb v/v			09/22/17 23:56	2.26
Carbon disulfide	3.5		1.8	ppb v/v			09/22/17 23:56	2.26
Carbon tetrachloride	ND		1.8	ppb v/v			09/22/17 23:56	2.26
Chlorobenzene	ND		0.68	ppb v/v			09/22/17 23:56	2.26
Dibromochloromethane	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Chloroethane	ND		1.8	ppb v/v			09/22/17 23:56	2.26
Chloroform	ND		0.68	ppb v/v			09/22/17 23:56	2.26
Chloromethane	ND		1.8	ppb v/v			09/22/17 23:56	2.26
1,2-Dibromoethane (EDB)	ND		1.8	ppb v/v			09/22/17 23:56	2.26
1,2-Dichlorobenzene	ND		0.90	ppb v/v			09/22/17 23:56	2.26
1,3-Dichlorobenzene	ND		0.90	ppb v/v			09/22/17 23:56	2.26
1,4-Dichlorobenzene	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Dichlorodifluoromethane	ND		0.90	ppb v/v			09/22/17 23:56	2.26
1,1-Dichloroethane	ND		0.68	ppb v/v			09/22/17 23:56	2.26
1,2-Dichloroethane	ND		1.8	ppb v/v			09/22/17 23:56	2.26
1,1-Dichloroethene	ND		1.8	ppb v/v			09/22/17 23:56	2.26
cis-1,2-Dichloroethene	3.3		0.90	ppb v/v			09/22/17 23:56	2.26
trans-1,2-Dichloroethene	ND		0.90	ppb v/v			09/22/17 23:56	2.26
1,2-Dichloropropane	ND		0.90	ppb v/v			09/22/17 23:56	2.26
cis-1,3-Dichloropropene	ND		0.90	ppb v/v			09/22/17 23:56	2.26
trans-1,3-Dichloropropene	ND		0.90	ppb v/v			09/22/17 23:56	2.26

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-29

Lab Sample ID: 320-31467-38

Date Collected: 09/07/17 13:34

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Ethylbenzene	ND		0.90	ppb v/v			09/22/17 23:56	2.26
4-Ethyltoluene	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Hexachlorobutadiene	ND		4.5	ppb v/v			09/22/17 23:56	2.26
2-Hexanone	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Methylene Chloride	ND		0.90	ppb v/v			09/22/17 23:56	2.26
4-Methyl-2-pentanone (MIBK)	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Styrene	ND		0.90	ppb v/v			09/22/17 23:56	2.26
1,1,2,2-Tetrachloroethane	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Tetrachloroethene	120		0.90	ppb v/v			09/22/17 23:56	2.26
Toluene	1.6		0.90	ppb v/v			09/22/17 23:56	2.26
1,2,4-Trichlorobenzene	ND		4.5	ppb v/v			09/22/17 23:56	2.26
1,1,1-Trichloroethane	ND		0.68	ppb v/v			09/22/17 23:56	2.26
1,1,2-Trichloroethane	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Trichloroethene	3.6		0.90	ppb v/v			09/22/17 23:56	2.26
Trichlorofluoromethane	ND		0.90	ppb v/v			09/22/17 23:56	2.26
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.90	ppb v/v			09/22/17 23:56	2.26
1,2,4-Trimethylbenzene	ND		1.8	ppb v/v			09/22/17 23:56	2.26
1,3,5-Trimethylbenzene	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Vinyl acetate	ND		1.8	ppb v/v			09/22/17 23:56	2.26
Vinyl chloride	ND		0.90	ppb v/v			09/22/17 23:56	2.26
m,p-Xylene	ND		1.8	ppb v/v			09/22/17 23:56	2.26
o-Xylene	ND		0.90	ppb v/v			09/22/17 23:56	2.26
Naphthalene	ND		1.8	ppb v/v			09/22/17 23:56	2.26
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		27	ug/m3			09/22/17 23:56	2.26
Benzene	ND		2.9	ug/m3			09/22/17 23:56	2.26
Benzyl chloride	ND		9.4	ug/m3			09/22/17 23:56	2.26
Bromodichloromethane	ND		4.5	ug/m3			09/22/17 23:56	2.26
Bromoform	ND		9.3	ug/m3			09/22/17 23:56	2.26
Bromomethane	ND		7.0	ug/m3			09/22/17 23:56	2.26
2-Butanone (MEK)	9.1		5.3	ug/m3			09/22/17 23:56	2.26
Carbon disulfide	11		5.6	ug/m3			09/22/17 23:56	2.26
Carbon tetrachloride	ND		11	ug/m3			09/22/17 23:56	2.26
Chlorobenzene	ND		3.1	ug/m3			09/22/17 23:56	2.26
Dibromochloromethane	ND		7.7	ug/m3			09/22/17 23:56	2.26
Chloroethane	ND		4.8	ug/m3			09/22/17 23:56	2.26
Chloroform	ND		3.3	ug/m3			09/22/17 23:56	2.26
Chloromethane	ND		3.7	ug/m3			09/22/17 23:56	2.26
1,2-Dibromoethane (EDB)	ND		14	ug/m3			09/22/17 23:56	2.26
1,2-Dichlorobenzene	ND		5.4	ug/m3			09/22/17 23:56	2.26
1,3-Dichlorobenzene	ND		5.4	ug/m3			09/22/17 23:56	2.26
1,4-Dichlorobenzene	ND		5.4	ug/m3			09/22/17 23:56	2.26
Dichlorodifluoromethane	ND		4.5	ug/m3			09/22/17 23:56	2.26
1,1-Dichloroethane	ND		2.7	ug/m3			09/22/17 23:56	2.26
1,2-Dichloroethane	ND		7.3	ug/m3			09/22/17 23:56	2.26
1,1-Dichloroethene	ND		7.2	ug/m3			09/22/17 23:56	2.26
cis-1,2-Dichloroethene	13		3.6	ug/m3			09/22/17 23:56	2.26

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-29

Lab Sample ID: 320-31467-38

Date Collected: 09/07/17 13:34

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		3.6	ug/m3			09/22/17 23:56	2.26
1,2-Dichloropropane	ND		4.2	ug/m3			09/22/17 23:56	2.26
cis-1,3-Dichloropropene	ND		4.1	ug/m3			09/22/17 23:56	2.26
trans-1,3-Dichloropropene	ND		4.1	ug/m3			09/22/17 23:56	2.26
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		6.3	ug/m3			09/22/17 23:56	2.26
Ethylbenzene	ND		3.9	ug/m3			09/22/17 23:56	2.26
4-Ethyltoluene	ND		4.4	ug/m3			09/22/17 23:56	2.26
Hexachlorobutadiene	ND		48	ug/m3			09/22/17 23:56	2.26
2-Hexanone	ND		3.7	ug/m3			09/22/17 23:56	2.26
Methylene Chloride	ND		3.1	ug/m3			09/22/17 23:56	2.26
4-Methyl-2-pentanone (MIBK)	ND		3.7	ug/m3			09/22/17 23:56	2.26
Styrene	ND		3.9	ug/m3			09/22/17 23:56	2.26
1,1,2,2-Tetrachloroethane	ND		6.2	ug/m3			09/22/17 23:56	2.26
Tetrachloroethene	830		6.1	ug/m3			09/22/17 23:56	2.26
Toluene	5.9		3.4	ug/m3			09/22/17 23:56	2.26
1,2,4-Trichlorobenzene	ND		34	ug/m3			09/22/17 23:56	2.26
1,1,1-Trichloroethane	ND		3.7	ug/m3			09/22/17 23:56	2.26
1,1,2-Trichloroethane	ND		4.9	ug/m3			09/22/17 23:56	2.26
Trichloroethene	19		4.9	ug/m3			09/22/17 23:56	2.26
Trichlorofluoromethane	ND		5.1	ug/m3			09/22/17 23:56	2.26
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.9	ug/m3			09/22/17 23:56	2.26
1,2,4-Trimethylbenzene	ND		8.9	ug/m3			09/22/17 23:56	2.26
1,3,5-Trimethylbenzene	ND		4.4	ug/m3			09/22/17 23:56	2.26
Vinyl acetate	ND		6.4	ug/m3			09/22/17 23:56	2.26
Vinyl chloride	ND		2.3	ug/m3			09/22/17 23:56	2.26
m,p-Xylene	ND		7.9	ug/m3			09/22/17 23:56	2.26
o-Xylene	ND		3.9	ug/m3			09/22/17 23:56	2.26
Naphthalene	ND		9.5	ug/m3			09/22/17 23:56	2.26
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130				09/22/17 23:56	2.26
1,2-Dichloroethane-d4 (Surr)	100		70 - 130				09/22/17 23:56	2.26
Toluene-d8 (Surr)	113		70 - 130				09/22/17 23:56	2.26

Client Sample ID: G-170907-RA-30

Lab Sample ID: 320-31467-39

Date Collected: 09/07/17 13:31

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		11	ppb v/v			09/23/17 00:50	2.18
Benzene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Benzyl chloride	ND		1.7	ppb v/v			09/23/17 00:50	2.18
Bromodichloromethane	ND		0.65	ppb v/v			09/23/17 00:50	2.18
Bromoform	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Bromomethane	ND		1.7	ppb v/v			09/23/17 00:50	2.18
2-Butanone (MEK)	5.5		1.7	ppb v/v			09/23/17 00:50	2.18
Carbon disulfide	4.4		1.7	ppb v/v			09/23/17 00:50	2.18

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-30

Lab Sample ID: 320-31467-39

Date Collected: 09/07/17 13:31

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		1.7	ppb v/v			09/23/17 00:50	2.18
Chlorobenzene	ND		0.65	ppb v/v			09/23/17 00:50	2.18
Dibromochloromethane	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Chloroethane	ND		1.7	ppb v/v			09/23/17 00:50	2.18
Chloroform	ND		0.65	ppb v/v			09/23/17 00:50	2.18
Chloromethane	ND		1.7	ppb v/v			09/23/17 00:50	2.18
1,2-Dibromoethane (EDB)	ND		1.7	ppb v/v			09/23/17 00:50	2.18
1,2-Dichlorobenzene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
1,3-Dichlorobenzene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
1,4-Dichlorobenzene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Dichlorodifluoromethane	ND		0.87	ppb v/v			09/23/17 00:50	2.18
1,1-Dichloroethane	ND		0.65	ppb v/v			09/23/17 00:50	2.18
1,2-Dichloroethane	ND		1.7	ppb v/v			09/23/17 00:50	2.18
1,1-Dichloroethene	ND		1.7	ppb v/v			09/23/17 00:50	2.18
cis-1,2-Dichloroethene	3.1		0.87	ppb v/v			09/23/17 00:50	2.18
trans-1,2-Dichloroethene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
1,2-Dichloropropane	ND		0.87	ppb v/v			09/23/17 00:50	2.18
cis-1,3-Dichloropropene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
trans-1,3-Dichloropropene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Ethylbenzene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
4-Ethyltoluene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Hexachlorobutadiene	ND		4.4	ppb v/v			09/23/17 00:50	2.18
2-Hexanone	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Methylene Chloride	ND		0.87	ppb v/v			09/23/17 00:50	2.18
4-Methyl-2-pentanone (MIBK)	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Styrene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
1,1,2,2-Tetrachloroethane	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Tetrachloroethene	110		0.87	ppb v/v			09/23/17 00:50	2.18
Toluene	0.89		0.87	ppb v/v			09/23/17 00:50	2.18
1,2,4-Trichlorobenzene	ND		4.4	ppb v/v			09/23/17 00:50	2.18
1,1,1-Trichloroethane	ND		0.65	ppb v/v			09/23/17 00:50	2.18
1,1,2-Trichloroethane	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Trichloroethene	3.2		0.87	ppb v/v			09/23/17 00:50	2.18
Trichlorofluoromethane	ND		0.87	ppb v/v			09/23/17 00:50	2.18
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.87	ppb v/v			09/23/17 00:50	2.18
1,2,4-Trimethylbenzene	ND		1.7	ppb v/v			09/23/17 00:50	2.18
1,3,5-Trimethylbenzene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Vinyl acetate	ND		1.7	ppb v/v			09/23/17 00:50	2.18
Vinyl chloride	ND		0.87	ppb v/v			09/23/17 00:50	2.18
m,p-Xylene	ND		1.7	ppb v/v			09/23/17 00:50	2.18
o-Xylene	ND		0.87	ppb v/v			09/23/17 00:50	2.18
Naphthalene	ND		1.7	ppb v/v			09/23/17 00:50	2.18
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		26	ug/m3			09/23/17 00:50	2.18
Benzene	ND		2.8	ug/m3			09/23/17 00:50	2.18
Benzyl chloride	ND		9.0	ug/m3			09/23/17 00:50	2.18
Bromodichloromethane	ND		4.4	ug/m3			09/23/17 00:50	2.18

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-30

Lab Sample ID: 320-31467-39

Date Collected: 09/07/17 13:31

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		9.0	ug/m3			09/23/17 00:50	2.18
Bromomethane	ND		6.8	ug/m3			09/23/17 00:50	2.18
2-Butanone (MEK)	16		5.1	ug/m3			09/23/17 00:50	2.18
Carbon disulfide	14		5.4	ug/m3			09/23/17 00:50	2.18
Carbon tetrachloride	ND		11	ug/m3			09/23/17 00:50	2.18
Chlorobenzene	ND		3.0	ug/m3			09/23/17 00:50	2.18
Dibromochloromethane	ND		7.4	ug/m3			09/23/17 00:50	2.18
Chloroethane	ND		4.6	ug/m3			09/23/17 00:50	2.18
Chloroform	ND		3.2	ug/m3			09/23/17 00:50	2.18
Chloromethane	ND		3.6	ug/m3			09/23/17 00:50	2.18
1,2-Dibromoethane (EDB)	ND		13	ug/m3			09/23/17 00:50	2.18
1,2-Dichlorobenzene	ND		5.2	ug/m3			09/23/17 00:50	2.18
1,3-Dichlorobenzene	ND		5.2	ug/m3			09/23/17 00:50	2.18
1,4-Dichlorobenzene	ND		5.2	ug/m3			09/23/17 00:50	2.18
Dichlorodifluoromethane	ND		4.3	ug/m3			09/23/17 00:50	2.18
1,1-Dichloroethane	ND		2.6	ug/m3			09/23/17 00:50	2.18
1,2-Dichloroethane	ND		7.1	ug/m3			09/23/17 00:50	2.18
1,1-Dichloroethene	ND		6.9	ug/m3			09/23/17 00:50	2.18
cis-1,2-Dichloroethene	12		3.5	ug/m3			09/23/17 00:50	2.18
trans-1,2-Dichloroethene	ND		3.5	ug/m3			09/23/17 00:50	2.18
1,2-Dichloropropane	ND		4.0	ug/m3			09/23/17 00:50	2.18
cis-1,3-Dichloropropene	ND		4.0	ug/m3			09/23/17 00:50	2.18
trans-1,3-Dichloropropene	ND		4.0	ug/m3			09/23/17 00:50	2.18
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		6.1	ug/m3			09/23/17 00:50	2.18
Ethylbenzene	ND		3.8	ug/m3			09/23/17 00:50	2.18
4-Ethyltoluene	ND		4.3	ug/m3			09/23/17 00:50	2.18
Hexachlorobutadiene	ND		46	ug/m3			09/23/17 00:50	2.18
2-Hexanone	ND		3.6	ug/m3			09/23/17 00:50	2.18
Methylene Chloride	ND		3.0	ug/m3			09/23/17 00:50	2.18
4-Methyl-2-pentanone (MIBK)	ND		3.6	ug/m3			09/23/17 00:50	2.18
Styrene	ND		3.7	ug/m3			09/23/17 00:50	2.18
1,1,2,2-Tetrachloroethane	ND		6.0	ug/m3			09/23/17 00:50	2.18
Tetrachloroethene	770		5.9	ug/m3			09/23/17 00:50	2.18
Toluene	3.3		3.3	ug/m3			09/23/17 00:50	2.18
1,2,4-Trichlorobenzene	ND		32	ug/m3			09/23/17 00:50	2.18
1,1,1-Trichloroethane	ND		3.6	ug/m3			09/23/17 00:50	2.18
1,1,2-Trichloroethane	ND		4.8	ug/m3			09/23/17 00:50	2.18
Trichloroethene	17		4.7	ug/m3			09/23/17 00:50	2.18
Trichlorofluoromethane	ND		4.9	ug/m3			09/23/17 00:50	2.18
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.7	ug/m3			09/23/17 00:50	2.18
1,2,4-Trimethylbenzene	ND		8.6	ug/m3			09/23/17 00:50	2.18
1,3,5-Trimethylbenzene	ND		4.3	ug/m3			09/23/17 00:50	2.18
Vinyl acetate	ND		6.1	ug/m3			09/23/17 00:50	2.18
Vinyl chloride	ND		2.2	ug/m3			09/23/17 00:50	2.18
m,p-Xylene	ND		7.6	ug/m3			09/23/17 00:50	2.18
o-Xylene	ND		3.8	ug/m3			09/23/17 00:50	2.18
Naphthalene	ND		9.1	ug/m3			09/23/17 00:50	2.18

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-30

Lab Sample ID: 320-31467-39

Date Collected: 09/07/17 13:31

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130		09/23/17 00:50	2.18
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		09/23/17 00:50	2.18
Toluene-d8 (Surr)	110		70 - 130		09/23/17 00:50	2.18

Client Sample ID: G-170907-RA-31

Lab Sample ID: 320-31467-40

Date Collected: 09/07/17 13:32

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.6		5.0	ppb v/v			09/23/17 01:47	1
Benzene	ND		0.40	ppb v/v			09/23/17 01:47	1
Benzyl chloride	ND		0.80	ppb v/v			09/23/17 01:47	1
Bromodichloromethane	ND		0.30	ppb v/v			09/23/17 01:47	1
Bromoform	ND		0.40	ppb v/v			09/23/17 01:47	1
Bromomethane	ND		0.80	ppb v/v			09/23/17 01:47	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/23/17 01:47	1
Carbon disulfide	3.7		0.80	ppb v/v			09/23/17 01:47	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/23/17 01:47	1
Chlorobenzene	ND		0.30	ppb v/v			09/23/17 01:47	1
Dibromochloromethane	ND		0.40	ppb v/v			09/23/17 01:47	1
Chloroethane	ND		0.80	ppb v/v			09/23/17 01:47	1
Chloroform	ND		0.30	ppb v/v			09/23/17 01:47	1
Chloromethane	ND		0.80	ppb v/v			09/23/17 01:47	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/23/17 01:47	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 01:47	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 01:47	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 01:47	1
Dichlorodifluoromethane	0.51		0.40	ppb v/v			09/23/17 01:47	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/23/17 01:47	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/23/17 01:47	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/23/17 01:47	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/23/17 01:47	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/23/17 01:47	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/23/17 01:47	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/23/17 01:47	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/23/17 01:47	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/23/17 01:47	1
Ethylbenzene	ND		0.40	ppb v/v			09/23/17 01:47	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/23/17 01:47	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/23/17 01:47	1
2-Hexanone	ND		0.40	ppb v/v			09/23/17 01:47	1
Methylene Chloride	0.42		0.40	ppb v/v			09/23/17 01:47	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/23/17 01:47	1
Styrene	ND		0.40	ppb v/v			09/23/17 01:47	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/23/17 01:47	1
Tetrachloroethene	ND		0.40	ppb v/v			09/23/17 01:47	1
Toluene	ND		0.40	ppb v/v			09/23/17 01:47	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-31

Lab Sample ID: 320-31467-40

Date Collected: 09/07/17 13:32

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/23/17 01:47	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/23/17 01:47	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/23/17 01:47	1
Trichloroethene	ND		0.40	ppb v/v			09/23/17 01:47	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/23/17 01:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/23/17 01:47	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/23/17 01:47	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/23/17 01:47	1
Vinyl acetate	ND		0.80	ppb v/v			09/23/17 01:47	1
Vinyl chloride	ND		0.40	ppb v/v			09/23/17 01:47	1
m,p-Xylene	ND		0.80	ppb v/v			09/23/17 01:47	1
o-Xylene	ND		0.40	ppb v/v			09/23/17 01:47	1
Naphthalene	ND		0.80	ppb v/v			09/23/17 01:47	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	13		12	ug/m3			09/23/17 01:47	1
Benzene	ND		1.3	ug/m3			09/23/17 01:47	1
Benzyl chloride	ND		4.1	ug/m3			09/23/17 01:47	1
Bromodichloromethane	ND		2.0	ug/m3			09/23/17 01:47	1
Bromoform	ND		4.1	ug/m3			09/23/17 01:47	1
Bromomethane	ND		3.1	ug/m3			09/23/17 01:47	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/23/17 01:47	1
Carbon disulfide	12		2.5	ug/m3			09/23/17 01:47	1
Carbon tetrachloride	ND		5.0	ug/m3			09/23/17 01:47	1
Chlorobenzene	ND		1.4	ug/m3			09/23/17 01:47	1
Dibromochloromethane	ND		3.4	ug/m3			09/23/17 01:47	1
Chloroethane	ND		2.1	ug/m3			09/23/17 01:47	1
Chloroform	ND		1.5	ug/m3			09/23/17 01:47	1
Chloromethane	ND		1.7	ug/m3			09/23/17 01:47	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/23/17 01:47	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 01:47	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 01:47	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 01:47	1
Dichlorodifluoromethane	2.5		2.0	ug/m3			09/23/17 01:47	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/23/17 01:47	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/23/17 01:47	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/23/17 01:47	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/23/17 01:47	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/23/17 01:47	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/23/17 01:47	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/23/17 01:47	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/23/17 01:47	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/23/17 01:47	1
Ethylbenzene	ND		1.7	ug/m3			09/23/17 01:47	1
4-Ethyltoluene	ND		2.0	ug/m3			09/23/17 01:47	1
Hexachlorobutadiene	ND		21	ug/m3			09/23/17 01:47	1
2-Hexanone	ND		1.6	ug/m3			09/23/17 01:47	1
Methylene Chloride	1.4		1.4	ug/m3			09/23/17 01:47	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/23/17 01:47	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-31

Lab Sample ID: 320-31467-40

Date Collected: 09/07/17 13:32

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1.7	ug/m3			09/23/17 01:47	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/23/17 01:47	1
Tetrachloroethene	ND		2.7	ug/m3			09/23/17 01:47	1
Toluene	ND		1.5	ug/m3			09/23/17 01:47	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/23/17 01:47	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/23/17 01:47	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/23/17 01:47	1
Trichloroethene	ND		2.1	ug/m3			09/23/17 01:47	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/23/17 01:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/23/17 01:47	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/23/17 01:47	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/23/17 01:47	1
Vinyl acetate	ND		2.8	ug/m3			09/23/17 01:47	1
Vinyl chloride	ND		1.0	ug/m3			09/23/17 01:47	1
m,p-Xylene	ND		3.5	ug/m3			09/23/17 01:47	1
o-Xylene	ND		1.7	ug/m3			09/23/17 01:47	1
Naphthalene	ND		4.2	ug/m3			09/23/17 01:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130		09/23/17 01:47	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		09/23/17 01:47	1
Toluene-d8 (Surr)	109		70 - 130		09/23/17 01:47	1

Client Sample ID: G-170907-RA-32

Lab Sample ID: 320-31467-41

Date Collected: 09/07/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	91		18	ppb v/v			09/23/17 02:39	3.65
Benzene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Benzyl chloride	ND		2.9	ppb v/v			09/23/17 02:39	3.65
Bromodichloromethane	ND		1.1	ppb v/v			09/23/17 02:39	3.65
Bromoform	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Bromomethane	ND		2.9	ppb v/v			09/23/17 02:39	3.65
2-Butanone (MEK)	6.7		2.9	ppb v/v			09/23/17 02:39	3.65
Carbon disulfide	ND		2.9	ppb v/v			09/23/17 02:39	3.65
Carbon tetrachloride	ND		2.9	ppb v/v			09/23/17 02:39	3.65
Chlorobenzene	ND		1.1	ppb v/v			09/23/17 02:39	3.65
Dibromochloromethane	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Chloroethane	ND		2.9	ppb v/v			09/23/17 02:39	3.65
Chloroform	ND		1.1	ppb v/v			09/23/17 02:39	3.65
Chloromethane	ND		2.9	ppb v/v			09/23/17 02:39	3.65
1,2-Dibromoethane (EDB)	ND		2.9	ppb v/v			09/23/17 02:39	3.65
1,2-Dichlorobenzene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
1,3-Dichlorobenzene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
1,4-Dichlorobenzene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Dichlorodifluoromethane	ND		1.5	ppb v/v			09/23/17 02:39	3.65

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-32

Lab Sample ID: 320-31467-41

Date Collected: 09/07/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		1.1	ppb v/v			09/23/17 02:39	3.65
1,2-Dichloroethane	ND		2.9	ppb v/v			09/23/17 02:39	3.65
1,1-Dichloroethene	ND		2.9	ppb v/v			09/23/17 02:39	3.65
cis-1,2-Dichloroethene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
trans-1,2-Dichloroethene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
1,2-Dichloropropane	ND		1.5	ppb v/v			09/23/17 02:39	3.65
cis-1,3-Dichloropropene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
trans-1,3-Dichloropropene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Ethylbenzene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
4-Ethyltoluene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Hexachlorobutadiene	ND		7.3	ppb v/v			09/23/17 02:39	3.65
2-Hexanone	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Methylene Chloride	ND		1.5	ppb v/v			09/23/17 02:39	3.65
4-Methyl-2-pentanone (MIBK)	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Styrene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
1,1,2,2-Tetrachloroethane	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Tetrachloroethene	4.5		1.5	ppb v/v			09/23/17 02:39	3.65
Toluene	9.2		1.5	ppb v/v			09/23/17 02:39	3.65
1,2,4-Trichlorobenzene	ND		7.3	ppb v/v			09/23/17 02:39	3.65
1,1,1-Trichloroethane	ND		1.1	ppb v/v			09/23/17 02:39	3.65
1,1,2-Trichloroethane	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Trichloroethene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Trichlorofluoromethane	ND		1.5	ppb v/v			09/23/17 02:39	3.65
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.5	ppb v/v			09/23/17 02:39	3.65
1,2,4-Trimethylbenzene	ND		2.9	ppb v/v			09/23/17 02:39	3.65
1,3,5-Trimethylbenzene	ND		1.5	ppb v/v			09/23/17 02:39	3.65
Vinyl acetate	ND		2.9	ppb v/v			09/23/17 02:39	3.65
Vinyl chloride	ND		1.5	ppb v/v			09/23/17 02:39	3.65
m,p-Xylene	4.7		2.9	ppb v/v			09/23/17 02:39	3.65
o-Xylene	1.6		1.5	ppb v/v			09/23/17 02:39	3.65
Naphthalene	ND		2.9	ppb v/v			09/23/17 02:39	3.65
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	220		43	ug/m3			09/23/17 02:39	3.65
Benzene	ND		4.7	ug/m3			09/23/17 02:39	3.65
Benzyl chloride	ND		15	ug/m3			09/23/17 02:39	3.65
Bromodichloromethane	ND		7.3	ug/m3			09/23/17 02:39	3.65
Bromoform	ND		15	ug/m3			09/23/17 02:39	3.65
Bromomethane	ND		11	ug/m3			09/23/17 02:39	3.65
2-Butanone (MEK)	20		8.6	ug/m3			09/23/17 02:39	3.65
Carbon disulfide	ND		9.1	ug/m3			09/23/17 02:39	3.65
Carbon tetrachloride	ND		18	ug/m3			09/23/17 02:39	3.65
Chlorobenzene	ND		5.0	ug/m3			09/23/17 02:39	3.65
Dibromochloromethane	ND		12	ug/m3			09/23/17 02:39	3.65
Chloroethane	ND		7.7	ug/m3			09/23/17 02:39	3.65
Chloroform	ND		5.3	ug/m3			09/23/17 02:39	3.65
Chloromethane	ND		6.0	ug/m3			09/23/17 02:39	3.65
1,2-Dibromoethane (EDB)	ND		22	ug/m3			09/23/17 02:39	3.65

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-32

Lab Sample ID: 320-31467-41

Date Collected: 09/07/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		8.8	ug/m3			09/23/17 02:39	3.65
1,3-Dichlorobenzene	ND		8.8	ug/m3			09/23/17 02:39	3.65
1,4-Dichlorobenzene	ND		8.8	ug/m3			09/23/17 02:39	3.65
Dichlorodifluoromethane	ND		7.2	ug/m3			09/23/17 02:39	3.65
1,1-Dichloroethane	ND		4.4	ug/m3			09/23/17 02:39	3.65
1,2-Dichloroethane	ND		12	ug/m3			09/23/17 02:39	3.65
1,1-Dichloroethene	ND		12	ug/m3			09/23/17 02:39	3.65
cis-1,2-Dichloroethene	ND		5.8	ug/m3			09/23/17 02:39	3.65
trans-1,2-Dichloroethene	ND		5.8	ug/m3			09/23/17 02:39	3.65
1,2-Dichloropropane	ND		6.7	ug/m3			09/23/17 02:39	3.65
cis-1,3-Dichloropropene	ND		6.6	ug/m3			09/23/17 02:39	3.65
trans-1,3-Dichloropropene	ND		6.6	ug/m3			09/23/17 02:39	3.65
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		10	ug/m3			09/23/17 02:39	3.65
Ethylbenzene	ND		6.3	ug/m3			09/23/17 02:39	3.65
4-Ethyltoluene	ND		7.2	ug/m3			09/23/17 02:39	3.65
Hexachlorobutadiene	ND		78	ug/m3			09/23/17 02:39	3.65
2-Hexanone	ND		6.0	ug/m3			09/23/17 02:39	3.65
Methylene Chloride	ND		5.1	ug/m3			09/23/17 02:39	3.65
4-Methyl-2-pentanone (MIBK)	ND		6.0	ug/m3			09/23/17 02:39	3.65
Styrene	ND		6.2	ug/m3			09/23/17 02:39	3.65
1,1,2,2-Tetrachloroethane	ND		10	ug/m3			09/23/17 02:39	3.65
Tetrachloroethene	31		9.9	ug/m3			09/23/17 02:39	3.65
Toluene	35		5.5	ug/m3			09/23/17 02:39	3.65
1,2,4-Trichlorobenzene	ND		54	ug/m3			09/23/17 02:39	3.65
1,1,1-Trichloroethane	ND		6.0	ug/m3			09/23/17 02:39	3.65
1,1,2-Trichloroethane	ND		8.0	ug/m3			09/23/17 02:39	3.65
Trichloroethene	ND		7.8	ug/m3			09/23/17 02:39	3.65
Trichlorofluoromethane	ND		8.2	ug/m3			09/23/17 02:39	3.65
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		11	ug/m3			09/23/17 02:39	3.65
1,2,4-Trimethylbenzene	ND		14	ug/m3			09/23/17 02:39	3.65
1,3,5-Trimethylbenzene	ND		7.2	ug/m3			09/23/17 02:39	3.65
Vinyl acetate	ND		10	ug/m3			09/23/17 02:39	3.65
Vinyl chloride	ND		3.7	ug/m3			09/23/17 02:39	3.65
m,p-Xylene	20		13	ug/m3			09/23/17 02:39	3.65
o-Xylene	7.0		6.3	ug/m3			09/23/17 02:39	3.65
Naphthalene	ND		15	ug/m3			09/23/17 02:39	3.65

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130		09/23/17 02:39	3.65
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		09/23/17 02:39	3.65
Toluene-d8 (Surr)	109		70 - 130		09/23/17 02:39	3.65

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-33

Lab Sample ID: 320-31467-42

Date Collected: 09/07/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	ppb v/v			09/23/17 03:37	1
Benzene	ND		0.40	ppb v/v			09/23/17 03:37	1
Benzyl chloride	ND		0.80	ppb v/v			09/23/17 03:37	1
Bromodichloromethane	ND		0.30	ppb v/v			09/23/17 03:37	1
Bromoform	ND		0.40	ppb v/v			09/23/17 03:37	1
Bromomethane	ND		0.80	ppb v/v			09/23/17 03:37	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/23/17 03:37	1
Carbon disulfide	1.5		0.80	ppb v/v			09/23/17 03:37	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/23/17 03:37	1
Chlorobenzene	ND		0.30	ppb v/v			09/23/17 03:37	1
Dibromochloromethane	ND		0.40	ppb v/v			09/23/17 03:37	1
Chloroethane	ND		0.80	ppb v/v			09/23/17 03:37	1
Chloroform	ND		0.30	ppb v/v			09/23/17 03:37	1
Chloromethane	ND		0.80	ppb v/v			09/23/17 03:37	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/23/17 03:37	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 03:37	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 03:37	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/23/17 03:37	1
Dichlorodifluoromethane	29		0.40	ppb v/v			09/23/17 03:37	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/23/17 03:37	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/23/17 03:37	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/23/17 03:37	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/23/17 03:37	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/23/17 03:37	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/23/17 03:37	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/23/17 03:37	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/23/17 03:37	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/23/17 03:37	1
Ethylbenzene	0.42		0.40	ppb v/v			09/23/17 03:37	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/23/17 03:37	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/23/17 03:37	1
2-Hexanone	ND		0.40	ppb v/v			09/23/17 03:37	1
Methylene Chloride	1.2		0.40	ppb v/v			09/23/17 03:37	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/23/17 03:37	1
Styrene	ND		0.40	ppb v/v			09/23/17 03:37	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/23/17 03:37	1
Tetrachloroethene	29		0.40	ppb v/v			09/23/17 03:37	1
Toluene	3.2		0.40	ppb v/v			09/23/17 03:37	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/23/17 03:37	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/23/17 03:37	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/23/17 03:37	1
Trichloroethene	0.68		0.40	ppb v/v			09/23/17 03:37	1
Trichlorofluoromethane	0.60		0.40	ppb v/v			09/23/17 03:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/23/17 03:37	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/23/17 03:37	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/23/17 03:37	1
Vinyl acetate	ND		0.80	ppb v/v			09/23/17 03:37	1
Vinyl chloride	ND		0.40	ppb v/v			09/23/17 03:37	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-33

Lab Sample ID: 320-31467-42

Date Collected: 09/07/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	0.90		0.80	ppb v/v			09/23/17 03:37	1
o-Xylene	ND		0.40	ppb v/v			09/23/17 03:37	1
Naphthalene	ND		0.80	ppb v/v			09/23/17 03:37	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		12	ug/m3			09/23/17 03:37	1
Benzene	ND		1.3	ug/m3			09/23/17 03:37	1
Benzyl chloride	ND		4.1	ug/m3			09/23/17 03:37	1
Bromodichloromethane	ND		2.0	ug/m3			09/23/17 03:37	1
Bromoform	ND		4.1	ug/m3			09/23/17 03:37	1
Bromomethane	ND		3.1	ug/m3			09/23/17 03:37	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/23/17 03:37	1
Carbon disulfide	4.8		2.5	ug/m3			09/23/17 03:37	1
Carbon tetrachloride	ND		5.0	ug/m3			09/23/17 03:37	1
Chlorobenzene	ND		1.4	ug/m3			09/23/17 03:37	1
Dibromochloromethane	ND		3.4	ug/m3			09/23/17 03:37	1
Chloroethane	ND		2.1	ug/m3			09/23/17 03:37	1
Chloroform	ND		1.5	ug/m3			09/23/17 03:37	1
Chloromethane	ND		1.7	ug/m3			09/23/17 03:37	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/23/17 03:37	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 03:37	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 03:37	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/23/17 03:37	1
Dichlorodifluoromethane	140		2.0	ug/m3			09/23/17 03:37	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/23/17 03:37	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/23/17 03:37	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/23/17 03:37	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/23/17 03:37	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/23/17 03:37	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/23/17 03:37	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/23/17 03:37	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/23/17 03:37	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/23/17 03:37	1
Ethylbenzene	1.8		1.7	ug/m3			09/23/17 03:37	1
4-Ethyltoluene	ND		2.0	ug/m3			09/23/17 03:37	1
Hexachlorobutadiene	ND		21	ug/m3			09/23/17 03:37	1
2-Hexanone	ND		1.6	ug/m3			09/23/17 03:37	1
Methylene Chloride	4.0		1.4	ug/m3			09/23/17 03:37	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/23/17 03:37	1
Styrene	ND		1.7	ug/m3			09/23/17 03:37	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/23/17 03:37	1
Tetrachloroethene	200		2.7	ug/m3			09/23/17 03:37	1
Toluene	12		1.5	ug/m3			09/23/17 03:37	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/23/17 03:37	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/23/17 03:37	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/23/17 03:37	1
Trichloroethene	3.7		2.1	ug/m3			09/23/17 03:37	1
Trichlorofluoromethane	3.4		2.2	ug/m3			09/23/17 03:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/23/17 03:37	1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-33

Lab Sample ID: 320-31467-42

Date Collected: 09/07/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/23/17 03:37	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/23/17 03:37	1
Vinyl acetate	ND		2.8	ug/m3			09/23/17 03:37	1
Vinyl chloride	ND		1.0	ug/m3			09/23/17 03:37	1
m,p-Xylene	3.9		3.5	ug/m3			09/23/17 03:37	1
o-Xylene	ND		1.7	ug/m3			09/23/17 03:37	1
Naphthalene	ND		4.2	ug/m3			09/23/17 03:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130				09/23/17 03:37	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 130				09/23/17 03:37	1
Toluene-d8 (Surr)	108		70 - 130				09/23/17 03:37	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Matrix: Air

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (70-130)	12DCE (70-130)	TOL (70-130)
320-31467-1	SS-170906-RA-01	101	101	118
320-31467-2	SS-170906-RA-02	99	102	115
320-31467-3	SS-170906-RA-03	98	105	111
320-31467-4	SS-170906-RA-04	97	99	111
320-31467-5	SS-170906-RA-05	99	102	113
320-31467-6	SS-170906-RA-06	97	103	111
320-31467-7	SS-170906-RA-07	94	100	110
320-31467-8	SS-170906-RA-08	97	98	111
320-31467-9	SS-170906-RA-09	93	97	110
320-31467-10	G-170907-RA-11	94	96	111
320-31467-11	G-170907-RA-12	102	96	98
320-31467-12	G-170907-RA-13	97	98	98
320-31467-13	G-170907-RA-14	98	95	100
320-31467-14	G-170907-RA-15	98	96	100
320-31467-15	G-170907-RA-16	99	96	104
320-31467-16	G-170907-RA-17	99	98	99
320-31467-17	G-170907-RA-18	96	97	100
320-31467-18	G-170907-RA-19	101	98	101
320-31467-19	G-170907-RA-20	103	95	99
320-31467-20	G-170906-RA-01	112	98	101
320-31467-21	G-170906-RA-02	111	98	122
320-31467-22	G-170906-RA-03	104	98	98
320-31467-23	G-170906-RA-04	104	96	101
320-31467-24	G-170906-RA-05	102	95	101
320-31467-25	G-170906-RA-06	102	95	97
320-31467-26	G-170906-RA-07	103	96	98
320-31467-27	G-170906-RA-08	102	95	99
320-31467-28	G-170907-RA-09	100	99	99
320-31467-29	G-170907-RA-10	98	98	100
320-31467-30	G-170907-RA-21	97	99	100
320-31467-31	G-170907-RA-22	95	99	100
320-31467-32	G-170907-RA-23	97	95	101
320-31467-33	G-170907-RA-24	101	102	116
320-31467-34	G-170907-RA-25	96	104	114
320-31467-35	G-170907-RA-26	98	98	114
320-31467-36	G-170907-RA-27	97	99	112
320-31467-37	G-170907-RA-28	95	99	110
320-31467-38	G-170907-RA-29	95	100	113
320-31467-39	G-170907-RA-30	93	99	110
320-31467-40	G-170907-RA-31	92	100	109
320-31467-41	G-170907-RA-32	91	101	109
320-31467-42	G-170907-RA-33	91	102	108
LCS 320-185612/26	Lab Control Sample	127	105	106
LCS 320-185620/3	Lab Control Sample	103	100	111
LCS 320-185823/3	Lab Control Sample	105	101	100
LCS 320-185826/3	Lab Control Sample	100	99	112
LCS 320-186106/3	Lab Control Sample	106	104	116
LCSD 320-185612/27	Lab Control Sample Dup	120	106	105
LCSD 320-185620/4	Lab Control Sample Dup	104	100	111

TestAmerica Sacramento

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)	12DCE (70-130)	TOL (70-130)
LCSD 320-185823/4	Lab Control Sample Dup	106	101	102
LCSD 320-185826/4	Lab Control Sample Dup	104	97	112
LCSD 320-186106/4	Lab Control Sample Dup	106	99	116
MB 320-185612/11	Method Blank	96	94	103
MB 320-185620/6	Method Blank	98	99	116
MB 320-185823/6	Method Blank	105	95	101
MB 320-185826/6	Method Blank	102	101	115
MB 320-186106/6	Method Blank	107	102	123

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 320-185612/11

Matrix: Air

Analysis Batch: 185612

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	ppb v/v			09/21/17 21:09	1
Benzene	ND		0.40	ppb v/v			09/21/17 21:09	1
Benzyl chloride	ND		0.80	ppb v/v			09/21/17 21:09	1
Bromodichloromethane	ND		0.30	ppb v/v			09/21/17 21:09	1
Bromoform	ND		0.40	ppb v/v			09/21/17 21:09	1
Bromomethane	ND		0.80	ppb v/v			09/21/17 21:09	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/21/17 21:09	1
Carbon disulfide	ND		0.80	ppb v/v			09/21/17 21:09	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/21/17 21:09	1
Chlorobenzene	ND		0.30	ppb v/v			09/21/17 21:09	1
Dibromochloromethane	ND		0.40	ppb v/v			09/21/17 21:09	1
Chloroethane	ND		0.80	ppb v/v			09/21/17 21:09	1
Chloroform	ND		0.30	ppb v/v			09/21/17 21:09	1
Chloromethane	ND		0.80	ppb v/v			09/21/17 21:09	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/21/17 21:09	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 21:09	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 21:09	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 21:09	1
Dichlorodifluoromethane	ND		0.40	ppb v/v			09/21/17 21:09	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/21/17 21:09	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/21/17 21:09	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/21/17 21:09	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/21/17 21:09	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/21/17 21:09	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/21/17 21:09	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/21/17 21:09	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/21/17 21:09	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/21/17 21:09	1
Ethylbenzene	ND		0.40	ppb v/v			09/21/17 21:09	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/21/17 21:09	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/21/17 21:09	1
2-Hexanone	ND		0.40	ppb v/v			09/21/17 21:09	1
Methylene Chloride	ND		0.40	ppb v/v			09/21/17 21:09	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/21/17 21:09	1
Styrene	ND		0.40	ppb v/v			09/21/17 21:09	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/21/17 21:09	1
Tetrachloroethene	ND		0.40	ppb v/v			09/21/17 21:09	1
Toluene	ND		0.40	ppb v/v			09/21/17 21:09	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/21/17 21:09	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/21/17 21:09	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/21/17 21:09	1
Trichloroethene	ND		0.40	ppb v/v			09/21/17 21:09	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/21/17 21:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/21/17 21:09	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/21/17 21:09	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/21/17 21:09	1
Vinyl acetate	ND		0.80	ppb v/v			09/21/17 21:09	1
Vinyl chloride	ND		0.40	ppb v/v			09/21/17 21:09	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-185612/11
Matrix: Air
Analysis Batch: 185612

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	ND		0.80	ppb v/v			09/21/17 21:09	1
o-Xylene	ND		0.40	ppb v/v			09/21/17 21:09	1
Naphthalene	ND		0.80	ppb v/v			09/21/17 21:09	1
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		12	ug/m3			09/21/17 21:09	1
Benzene	ND		1.3	ug/m3			09/21/17 21:09	1
Benzyl chloride	ND		4.1	ug/m3			09/21/17 21:09	1
Bromodichloromethane	ND		2.0	ug/m3			09/21/17 21:09	1
Bromoform	ND		4.1	ug/m3			09/21/17 21:09	1
Bromomethane	ND		3.1	ug/m3			09/21/17 21:09	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/21/17 21:09	1
Carbon disulfide	ND		2.5	ug/m3			09/21/17 21:09	1
Carbon tetrachloride	ND		5.0	ug/m3			09/21/17 21:09	1
Chlorobenzene	ND		1.4	ug/m3			09/21/17 21:09	1
Dibromochloromethane	ND		3.4	ug/m3			09/21/17 21:09	1
Chloroethane	ND		2.1	ug/m3			09/21/17 21:09	1
Chloroform	ND		1.5	ug/m3			09/21/17 21:09	1
Chloromethane	ND		1.7	ug/m3			09/21/17 21:09	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/21/17 21:09	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 21:09	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 21:09	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 21:09	1
Dichlorodifluoromethane	ND		2.0	ug/m3			09/21/17 21:09	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/21/17 21:09	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/21/17 21:09	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/21/17 21:09	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/21/17 21:09	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/21/17 21:09	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/21/17 21:09	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/21/17 21:09	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/21/17 21:09	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/21/17 21:09	1
Ethylbenzene	ND		1.7	ug/m3			09/21/17 21:09	1
4-Ethyltoluene	ND		2.0	ug/m3			09/21/17 21:09	1
Hexachlorobutadiene	ND		21	ug/m3			09/21/17 21:09	1
2-Hexanone	ND		1.6	ug/m3			09/21/17 21:09	1
Methylene Chloride	ND		1.4	ug/m3			09/21/17 21:09	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/21/17 21:09	1
Styrene	ND		1.7	ug/m3			09/21/17 21:09	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/21/17 21:09	1
Tetrachloroethene	ND		2.7	ug/m3			09/21/17 21:09	1
Toluene	ND		1.5	ug/m3			09/21/17 21:09	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/21/17 21:09	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/21/17 21:09	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/21/17 21:09	1
Trichloroethene	ND		2.1	ug/m3			09/21/17 21:09	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/21/17 21:09	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-185612/11
Matrix: Air
Analysis Batch: 185612

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/21/17 21:09	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/21/17 21:09	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/21/17 21:09	1
Vinyl acetate	ND		2.8	ug/m3			09/21/17 21:09	1
Vinyl chloride	ND		1.0	ug/m3			09/21/17 21:09	1
m,p-Xylene	ND		3.5	ug/m3			09/21/17 21:09	1
o-Xylene	ND		1.7	ug/m3			09/21/17 21:09	1
Naphthalene	ND		4.2	ug/m3			09/21/17 21:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		70 - 130		09/21/17 21:09	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 130		09/21/17 21:09	1
Toluene-d8 (Surr)	103		70 - 130		09/21/17 21:09	1

Lab Sample ID: LCS 320-185612/26
Matrix: Air
Analysis Batch: 185612

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	18.6		ppb v/v		93	71 - 131
Benzene	20.0	19.5		ppb v/v		97	68 - 128
Benzyl chloride	16.0	16.3		ppb v/v		102	58 - 120
Bromodichloromethane	20.0	20.5		ppb v/v		102	65 - 130
Bromoform	20.0	20.5		ppb v/v		103	64 - 144
Bromomethane	20.0	18.9		ppb v/v		95	70 - 131
2-Butanone (MEK)	20.0	20.4		ppb v/v		102	71 - 131
Carbon disulfide	20.0	19.2		ppb v/v		96	63 - 123
Carbon tetrachloride	20.0	20.0		ppb v/v		100	67 - 127
Chlorobenzene	20.0	19.0		ppb v/v		95	70 - 132
Dibromochloromethane	20.0	19.9		ppb v/v		99	68 - 128
Chloroethane	20.0	18.0		ppb v/v		90	70 - 131
Chloroform	20.0	19.9		ppb v/v		100	69 - 129
Chloromethane	20.0	16.7		ppb v/v		84	67 - 127
1,2-Dibromoethane (EDB)	20.0	18.9		ppb v/v		95	68 - 131
1,2-Dichlorobenzene	20.0	19.2		ppb v/v		96	73 - 143
1,3-Dichlorobenzene	20.0	18.5		ppb v/v		92	77 - 136
1,4-Dichlorobenzene	20.0	18.7		ppb v/v		93	73 - 143
Dichlorodifluoromethane	20.0	20.6		ppb v/v		103	69 - 129
1,1-Dichloroethane	20.0	19.3		ppb v/v		96	65 - 125
1,2-Dichloroethane	20.0	20.3		ppb v/v		102	71 - 131
1,1-Dichloroethene	20.0	19.7		ppb v/v		99	53 - 128
cis-1,2-Dichloroethene	20.0	20.2		ppb v/v		101	68 - 128
trans-1,2-Dichloroethene	20.0	19.3		ppb v/v		96	70 - 130
1,2-Dichloropropane	20.0	20.4		ppb v/v		102	74 - 128
cis-1,3-Dichloropropene	20.0	20.3		ppb v/v		101	78 - 132
trans-1,3-Dichloropropene	20.0	19.3		ppb v/v		97	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	20.0		ppb v/v		100	64 - 124

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-185612/26

Matrix: Air

Analysis Batch: 185612

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	20.0	17.7		ppb v/v		89	76 - 136
4-Ethyltoluene	20.0	20.1		ppb v/v		100	62 - 136
Hexachlorobutadiene	20.0	19.8		ppb v/v		99	42 - 150
2-Hexanone	20.0	20.0		ppb v/v		100	70 - 128
Methylene Chloride	20.0	17.7		ppb v/v		88	65 - 125
4-Methyl-2-pentanone (MIBK)	20.0	21.0		ppb v/v		105	73 - 133
Styrene	20.0	18.6		ppb v/v		93	76 - 144
1,1,2,2-Tetrachloroethane	20.0	18.5		ppb v/v		92	75 - 135
Tetrachloroethene	20.0	19.3		ppb v/v		96	56 - 138
Toluene	20.0	19.7		ppb v/v		98	71 - 132
1,2,4-Trichlorobenzene	20.0	20.3		ppb v/v		102	59 - 150
1,1,1-Trichloroethane	20.0	20.2		ppb v/v		101	65 - 124
1,1,2-Trichloroethane	20.0	18.7		ppb v/v		93	71 - 131
Trichloroethene	20.0	20.2		ppb v/v		101	64 - 127
Trichlorofluoromethane	20.0	20.6		ppb v/v		103	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	19.3		ppb v/v		97	50 - 132
1,2,4-Trimethylbenzene	20.0	19.7		ppb v/v		99	61 - 145
1,3,5-Trimethylbenzene	20.0	20.2		ppb v/v		101	65 - 136
Vinyl acetate	20.0	18.6		ppb v/v		93	77 - 134
Vinyl chloride	20.0	18.4		ppb v/v		92	69 - 129
m,p-Xylene	40.0	36.1		ppb v/v		90	75 - 138
o-Xylene	20.0	18.5		ppb v/v		93	77 - 132
Naphthalene	20.0	19.9		ppb v/v		100	58 - 150

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	48	44.1		ug/m3		93	71 - 131
Benzene	64	62.2		ug/m3		97	68 - 128
Benzyl chloride	83	84.4		ug/m3		102	58 - 120
Bromodichloromethane	130	137		ug/m3		102	65 - 130
Bromoform	210	212		ug/m3		103	64 - 144
Bromomethane	78	73.6		ug/m3		95	70 - 131
2-Butanone (MEK)	59	60.2		ug/m3		102	71 - 131
Carbon disulfide	62	59.9		ug/m3		96	63 - 123
Carbon tetrachloride	130	126		ug/m3		100	67 - 127
Chlorobenzene	92	87.5		ug/m3		95	70 - 132
Dibromochloromethane	170	169		ug/m3		99	68 - 128
Chloroethane	53	47.6		ug/m3		90	70 - 131
Chloroform	98	97.3		ug/m3		100	69 - 129
Chloromethane	41	34.6		ug/m3		84	67 - 127
1,2-Dibromoethane (EDB)	150	146		ug/m3		95	68 - 131
1,2-Dichlorobenzene	120	116		ug/m3		96	73 - 143
1,3-Dichlorobenzene	120	111		ug/m3		92	77 - 136
1,4-Dichlorobenzene	120	112		ug/m3		93	73 - 143
Dichlorodifluoromethane	99	102		ug/m3		103	69 - 129
1,1-Dichloroethane	81	78.1		ug/m3		96	65 - 125
1,2-Dichloroethane	81	82.2		ug/m3		102	71 - 131
1,1-Dichloroethene	79	78.2		ug/m3		99	53 - 128

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-185612/26

Matrix: Air

Analysis Batch: 185612

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	79	80.0		ug/m3		101	68 - 128
trans-1,2-Dichloroethene	79	76.5		ug/m3		96	70 - 130
1,2-Dichloropropane	92	94.4		ug/m3		102	74 - 128
cis-1,3-Dichloropropene	91	92.1		ug/m3		101	78 - 132
trans-1,3-Dichloropropene	91	87.8		ug/m3		97	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	140		ug/m3		100	64 - 124
Ethylbenzene	87	76.9		ug/m3		89	76 - 136
4-Ethyltoluene	98	98.7		ug/m3		100	62 - 136
Hexachlorobutadiene	210	211		ug/m3		99	42 - 150
2-Hexanone	82	82.1		ug/m3		100	70 - 128
Methylene Chloride	69	61.4		ug/m3		88	65 - 125
4-Methyl-2-pentanone (MIBK)	82	86.1		ug/m3		105	73 - 133
Styrene	85	79.0		ug/m3		93	76 - 144
1,1,2,2-Tetrachloroethane	140	127		ug/m3		92	75 - 135
Tetrachloroethene	140	131		ug/m3		96	56 - 138
Toluene	75	74.1		ug/m3		98	71 - 132
1,2,4-Trichlorobenzene	150	151		ug/m3		102	59 - 150
1,1,1-Trichloroethane	110	110		ug/m3		101	65 - 124
1,1,2-Trichloroethane	110	102		ug/m3		93	71 - 131
Trichloroethene	110	109		ug/m3		101	64 - 127
Trichlorofluoromethane	110	116		ug/m3		103	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	150	148		ug/m3		97	50 - 132
1,2,4-Trimethylbenzene	98	97.1		ug/m3		99	61 - 145
1,3,5-Trimethylbenzene	98	99.2		ug/m3		101	65 - 136
Vinyl acetate	70	65.4		ug/m3		93	77 - 134
Vinyl chloride	51	47.1		ug/m3		92	69 - 129
m,p-Xylene	170	157		ug/m3		90	75 - 138
o-Xylene	87	80.5		ug/m3		93	77 - 132
Naphthalene	100	104		ug/m3		100	58 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	127		70 - 130
1,2-Dichloroethane-d4 (Surr)	105		70 - 130
Toluene-d8 (Surr)	106		70 - 130

Lab Sample ID: LCSD 320-185612/27

Matrix: Air

Analysis Batch: 185612

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	20.0	19.7		ppb v/v		99	71 - 131	6	25
Benzene	20.0	19.5		ppb v/v		98	68 - 128	0	25
Benzyl chloride	16.0	17.1		ppb v/v		107	58 - 120	5	25
Bromodichloromethane	20.0	20.4		ppb v/v		102	65 - 130	0	25
Bromoform	20.0	20.8		ppb v/v		104	64 - 144	1	25
Bromomethane	20.0	19.1		ppb v/v		95	70 - 131	1	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-185612/27

Client Sample ID: Lab Control Sample Dup

Matrix: Air

Prep Type: Total/NA

Analysis Batch: 185612

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	20.0	21.5		ppb v/v		108	71 - 131	5	25
Carbon disulfide	20.0	19.4		ppb v/v		97	63 - 123	1	25
Carbon tetrachloride	20.0	19.8		ppb v/v		99	67 - 127	1	25
Chlorobenzene	20.0	19.4		ppb v/v		97	70 - 132	2	25
Dibromochloromethane	20.0	20.3		ppb v/v		101	68 - 128	2	25
Chloroethane	20.0	18.6		ppb v/v		93	70 - 131	3	25
Chloroform	20.0	20.2		ppb v/v		101	69 - 129	2	25
Chloromethane	20.0	16.9		ppb v/v		84	67 - 127	1	25
1,2-Dibromoethane (EDB)	20.0	19.3		ppb v/v		96	68 - 131	2	25
1,2-Dichlorobenzene	20.0	19.6		ppb v/v		98	73 - 143	2	25
1,3-Dichlorobenzene	20.0	18.5		ppb v/v		92	77 - 136	0	25
1,4-Dichlorobenzene	20.0	18.7		ppb v/v		94	73 - 143	0	25
Dichlorodifluoromethane	20.0	20.5		ppb v/v		103	69 - 129	1	25
1,1-Dichloroethane	20.0	19.7		ppb v/v		98	65 - 125	2	25
1,2-Dichloroethane	20.0	20.2		ppb v/v		101	71 - 131	0	25
1,1-Dichloroethene	20.0	20.1		ppb v/v		101	53 - 128	2	25
cis-1,2-Dichloroethene	20.0	20.2		ppb v/v		101	68 - 128	0	25
trans-1,2-Dichloroethene	20.0	19.6		ppb v/v		98	70 - 130	2	25
1,2-Dichloropropane	20.0	20.5		ppb v/v		103	74 - 128	1	25
cis-1,3-Dichloropropene	20.0	20.3		ppb v/v		102	78 - 132	0	25
trans-1,3-Dichloropropene	20.0	19.7		ppb v/v		99	56 - 136	2	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	20.6		ppb v/v		103	64 - 124	3	25
Ethylbenzene	20.0	18.1		ppb v/v		90	76 - 136	2	25
4-Ethyltoluene	20.0	21.0		ppb v/v		105	62 - 136	5	25
Hexachlorobutadiene	20.0	19.8		ppb v/v		99	42 - 150	0	25
2-Hexanone	20.0	21.0		ppb v/v		105	70 - 128	4	25
Methylene Chloride	20.0	18.0		ppb v/v		90	65 - 125	2	25
4-Methyl-2-pentanone (MIBK)	20.0	21.6		ppb v/v		108	73 - 133	3	25
Styrene	20.0	19.1		ppb v/v		95	76 - 144	3	25
1,1,2,2-Tetrachloroethane	20.0	19.2		ppb v/v		96	75 - 135	4	25
Tetrachloroethene	20.0	19.6		ppb v/v		98	56 - 138	2	25
Toluene	20.0	19.5		ppb v/v		98	71 - 132	1	25
1,2,4-Trichlorobenzene	20.0	21.1		ppb v/v		106	59 - 150	4	25
1,1,1-Trichloroethane	20.0	20.4		ppb v/v		102	65 - 124	1	25
1,1,2-Trichloroethane	20.0	19.1		ppb v/v		95	71 - 131	2	25
Trichloroethene	20.0	20.4		ppb v/v		102	64 - 127	1	25
Trichlorofluoromethane	20.0	20.7		ppb v/v		104	68 - 128	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	19.4		ppb v/v		97	50 - 132	1	25
1,2,4-Trimethylbenzene	20.0	20.5		ppb v/v		103	61 - 145	4	25
1,3,5-Trimethylbenzene	20.0	21.2		ppb v/v		106	65 - 136	5	25
Vinyl acetate	20.0	19.7		ppb v/v		99	77 - 134	6	25
Vinyl chloride	20.0	18.7		ppb v/v		94	69 - 129	2	25
m,p-Xylene	40.0	37.3		ppb v/v		93	75 - 138	3	25
o-Xylene	20.0	19.2		ppb v/v		96	77 - 132	4	25
Naphthalene	20.0	20.9		ppb v/v		104	58 - 150	5	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	48	46.9		ug/m3		99	71 - 131	6	25
Benzene	64	62.4		ug/m3		98	68 - 128	0	25
Benzyl chloride	83	88.5		ug/m3		107	58 - 120	5	25
Bromodichloromethane	130	137		ug/m3		102	65 - 130	0	25
Bromoform	210	215		ug/m3		104	64 - 144	1	25
Bromomethane	78	74.1		ug/m3		95	70 - 131	1	25
2-Butanone (MEK)	59	63.4		ug/m3		108	71 - 131	5	25
Carbon disulfide	62	60.5		ug/m3		97	63 - 123	1	25
Carbon tetrachloride	130	125		ug/m3		99	67 - 127	1	25
Chlorobenzene	92	89.3		ug/m3		97	70 - 132	2	25
Dibromochloromethane	170	173		ug/m3		101	68 - 128	2	25
Chloroethane	53	49.0		ug/m3		93	70 - 131	3	25
Chloroform	98	98.8		ug/m3		101	69 - 129	2	25
Chloromethane	41	34.9		ug/m3		84	67 - 127	1	25
1,2-Dibromoethane (EDB)	150	148		ug/m3		96	68 - 131	2	25
1,2-Dichlorobenzene	120	118		ug/m3		98	73 - 143	2	25
1,3-Dichlorobenzene	120	111		ug/m3		92	77 - 136	0	25
1,4-Dichlorobenzene	120	113		ug/m3		94	73 - 143	0	25
Dichlorodifluoromethane	99	101		ug/m3		103	69 - 129	1	25
1,1-Dichloroethane	81	79.6		ug/m3		98	65 - 125	2	25
1,2-Dichloroethane	81	81.9		ug/m3		101	71 - 131	0	25
1,1-Dichloroethene	79	79.9		ug/m3		101	53 - 128	2	25
cis-1,2-Dichloroethene	79	80.2		ug/m3		101	68 - 128	0	25
trans-1,2-Dichloroethene	79	77.6		ug/m3		98	70 - 130	2	25
1,2-Dichloropropane	92	94.9		ug/m3		103	74 - 128	1	25
cis-1,3-Dichloropropene	91	92.3		ug/m3		102	78 - 132	0	25
trans-1,3-Dichloropropene	91	89.5		ug/m3		99	56 - 136	2	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	144		ug/m3		103	64 - 124	3	25
Ethylbenzene	87	78.5		ug/m3		90	76 - 136	2	25
4-Ethyltoluene	98	103		ug/m3		105	62 - 136	5	25
Hexachlorobutadiene	210	211		ug/m3		99	42 - 150	0	25
2-Hexanone	82	85.9		ug/m3		105	70 - 128	4	25
Methylene Chloride	69	62.6		ug/m3		90	65 - 125	2	25
4-Methyl-2-pentanone (MIBK)	82	88.5		ug/m3		108	73 - 133	3	25
Styrene	85	81.3		ug/m3		95	76 - 144	3	25
1,1,2,2-Tetrachloroethane	140	132		ug/m3		96	75 - 135	4	25
Tetrachloroethene	140	133		ug/m3		98	56 - 138	2	25
Toluene	75	73.6		ug/m3		98	71 - 132	1	25
1,2,4-Trichlorobenzene	150	157		ug/m3		106	59 - 150	4	25
1,1,1-Trichloroethane	110	111		ug/m3		102	65 - 124	1	25
1,1,2-Trichloroethane	110	104		ug/m3		95	71 - 131	2	25
Trichloroethene	110	109		ug/m3		102	64 - 127	1	25
Trichlorofluoromethane	110	116		ug/m3		104	68 - 128	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	150	149		ug/m3		97	50 - 132	1	25
1,2,4-Trimethylbenzene	98	101		ug/m3		103	61 - 145	4	25
1,3,5-Trimethylbenzene	98	104		ug/m3		106	65 - 136	5	25
Vinyl acetate	70	69.4		ug/m3		99	77 - 134	6	25
Vinyl chloride	51	47.9		ug/m3		94	69 - 129	2	25
m,p-Xylene	170	162		ug/m3		93	75 - 138	3	25
o-Xylene	87	83.4		ug/m3		96	77 - 132	4	25
Naphthalene	100	109		ug/m3		104	58 - 150	5	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-185612/27

Matrix: Air

Analysis Batch: 185612

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	120		70 - 130
1,2-Dichloroethane-d4 (Surr)	106		70 - 130
Toluene-d8 (Surr)	105		70 - 130

Lab Sample ID: MB 320-185620/6

Matrix: Air

Analysis Batch: 185620

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	ppb v/v			09/21/17 15:01	1
Benzene	ND		0.40	ppb v/v			09/21/17 15:01	1
Benzyl chloride	ND		0.80	ppb v/v			09/21/17 15:01	1
Bromodichloromethane	ND		0.30	ppb v/v			09/21/17 15:01	1
Bromoform	ND		0.40	ppb v/v			09/21/17 15:01	1
Bromomethane	ND		0.80	ppb v/v			09/21/17 15:01	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/21/17 15:01	1
Carbon disulfide	ND		0.80	ppb v/v			09/21/17 15:01	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/21/17 15:01	1
Chlorobenzene	ND		0.30	ppb v/v			09/21/17 15:01	1
Dibromochloromethane	ND		0.40	ppb v/v			09/21/17 15:01	1
Chloroethane	ND		0.80	ppb v/v			09/21/17 15:01	1
Chloroform	ND		0.30	ppb v/v			09/21/17 15:01	1
Chloromethane	ND		0.80	ppb v/v			09/21/17 15:01	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/21/17 15:01	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 15:01	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 15:01	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/21/17 15:01	1
Dichlorodifluoromethane	ND		0.40	ppb v/v			09/21/17 15:01	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/21/17 15:01	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/21/17 15:01	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/21/17 15:01	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/21/17 15:01	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/21/17 15:01	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/21/17 15:01	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/21/17 15:01	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/21/17 15:01	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/21/17 15:01	1
Ethylbenzene	ND		0.40	ppb v/v			09/21/17 15:01	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/21/17 15:01	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/21/17 15:01	1
2-Hexanone	ND		0.40	ppb v/v			09/21/17 15:01	1
Methylene Chloride	ND		0.40	ppb v/v			09/21/17 15:01	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/21/17 15:01	1
Styrene	ND		0.40	ppb v/v			09/21/17 15:01	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/21/17 15:01	1
Tetrachloroethene	ND		0.40	ppb v/v			09/21/17 15:01	1
Toluene	ND		0.40	ppb v/v			09/21/17 15:01	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/21/17 15:01	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-185620/6
Matrix: Air
Analysis Batch: 185620

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/21/17 15:01	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/21/17 15:01	1
Trichloroethene	ND		0.40	ppb v/v			09/21/17 15:01	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/21/17 15:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/21/17 15:01	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/21/17 15:01	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/21/17 15:01	1
Vinyl acetate	ND		0.80	ppb v/v			09/21/17 15:01	1
Vinyl chloride	ND		0.40	ppb v/v			09/21/17 15:01	1
m,p-Xylene	ND		0.80	ppb v/v			09/21/17 15:01	1
o-Xylene	ND		0.40	ppb v/v			09/21/17 15:01	1
Naphthalene	ND		0.80	ppb v/v			09/21/17 15:01	1

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		12	ug/m3			09/21/17 15:01	1
Benzene	ND		1.3	ug/m3			09/21/17 15:01	1
Benzyl chloride	ND		4.1	ug/m3			09/21/17 15:01	1
Bromodichloromethane	ND		2.0	ug/m3			09/21/17 15:01	1
Bromoform	ND		4.1	ug/m3			09/21/17 15:01	1
Bromomethane	ND		3.1	ug/m3			09/21/17 15:01	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/21/17 15:01	1
Carbon disulfide	ND		2.5	ug/m3			09/21/17 15:01	1
Carbon tetrachloride	ND		5.0	ug/m3			09/21/17 15:01	1
Chlorobenzene	ND		1.4	ug/m3			09/21/17 15:01	1
Dibromochloromethane	ND		3.4	ug/m3			09/21/17 15:01	1
Chloroethane	ND		2.1	ug/m3			09/21/17 15:01	1
Chloroform	ND		1.5	ug/m3			09/21/17 15:01	1
Chloromethane	ND		1.7	ug/m3			09/21/17 15:01	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/21/17 15:01	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 15:01	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 15:01	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/21/17 15:01	1
Dichlorodifluoromethane	ND		2.0	ug/m3			09/21/17 15:01	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/21/17 15:01	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/21/17 15:01	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/21/17 15:01	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/21/17 15:01	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/21/17 15:01	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/21/17 15:01	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/21/17 15:01	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/21/17 15:01	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/21/17 15:01	1
Ethylbenzene	ND		1.7	ug/m3			09/21/17 15:01	1
4-Ethyltoluene	ND		2.0	ug/m3			09/21/17 15:01	1
Hexachlorobutadiene	ND		21	ug/m3			09/21/17 15:01	1
2-Hexanone	ND		1.6	ug/m3			09/21/17 15:01	1
Methylene Chloride	ND		1.4	ug/m3			09/21/17 15:01	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/21/17 15:01	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-185620/6
Matrix: Air
Analysis Batch: 185620

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		1.7	ug/m3			09/21/17 15:01	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/21/17 15:01	1
Tetrachloroethene	ND		2.7	ug/m3			09/21/17 15:01	1
Toluene	ND		1.5	ug/m3			09/21/17 15:01	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/21/17 15:01	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/21/17 15:01	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/21/17 15:01	1
Trichloroethene	ND		2.1	ug/m3			09/21/17 15:01	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/21/17 15:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/21/17 15:01	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/21/17 15:01	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/21/17 15:01	1
Vinyl acetate	ND		2.8	ug/m3			09/21/17 15:01	1
Vinyl chloride	ND		1.0	ug/m3			09/21/17 15:01	1
m,p-Xylene	ND		3.5	ug/m3			09/21/17 15:01	1
o-Xylene	ND		1.7	ug/m3			09/21/17 15:01	1
Naphthalene	ND		4.2	ug/m3			09/21/17 15:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130		09/21/17 15:01	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		09/21/17 15:01	1
Toluene-d8 (Surr)	116		70 - 130		09/21/17 15:01	1

Lab Sample ID: LCS 320-185620/3
Matrix: Air
Analysis Batch: 185620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	19.7		ppb v/v		99	71 - 131
Benzene	20.0	19.9		ppb v/v		99	68 - 128
Benzyl chloride	16.0	14.7		ppb v/v		92	58 - 120
Bromodichloromethane	20.0	19.4		ppb v/v		97	65 - 130
Bromoform	20.0	17.1		ppb v/v		86	64 - 144
Bromomethane	20.0	19.5		ppb v/v		97	70 - 131
2-Butanone (MEK)	20.0	20.9		ppb v/v		104	71 - 131
Carbon disulfide	20.0	20.3		ppb v/v		101	63 - 123
Carbon tetrachloride	20.0	18.9		ppb v/v		94	67 - 127
Chlorobenzene	20.0	17.1		ppb v/v		86	70 - 132
Dibromochloromethane	20.0	17.4		ppb v/v		87	68 - 128
Chloroethane	20.0	20.9		ppb v/v		104	70 - 131
Chloroform	20.0	19.5		ppb v/v		98	69 - 129
Chloromethane	20.0	19.8		ppb v/v		99	67 - 127
1,2-Dibromoethane (EDB)	20.0	17.5		ppb v/v		88	68 - 131
1,2-Dichlorobenzene	20.0	17.4		ppb v/v		87	73 - 143
1,3-Dichlorobenzene	20.0	17.3		ppb v/v		86	77 - 136
1,4-Dichlorobenzene	20.0	17.5		ppb v/v		88	73 - 143
Dichlorodifluoromethane	20.0	14.1		ppb v/v		70	69 - 129
1,1-Dichloroethane	20.0	20.2		ppb v/v		101	65 - 125

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-185620/3
Matrix: Air
Analysis Batch: 185620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	20.0	19.1		ppb v/v		95	71 - 131
1,1-Dichloroethene	20.0	19.8		ppb v/v		99	53 - 128
cis-1,2-Dichloroethene	20.0	19.8		ppb v/v		99	68 - 128
trans-1,2-Dichloroethene	20.0	20.1		ppb v/v		100	70 - 130
1,2-Dichloropropane	20.0	19.5		ppb v/v		97	74 - 128
cis-1,3-Dichloropropene	20.0	20.1		ppb v/v		100	78 - 132
trans-1,3-Dichloropropene	20.0	17.6		ppb v/v		88	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	18.9		ppb v/v		95	64 - 124
Ethylbenzene	20.0	16.9		ppb v/v		85	76 - 136
4-Ethyltoluene	20.0	17.2		ppb v/v		86	62 - 136
Hexachlorobutadiene	20.0	18.5		ppb v/v		93	42 - 150
2-Hexanone	20.0	19.0		ppb v/v		95	70 - 128
Methylene Chloride	20.0	19.0		ppb v/v		95	65 - 125
4-Methyl-2-pentanone (MIBK)	20.0	21.1		ppb v/v		106	73 - 133
Styrene	20.0	17.4		ppb v/v		87	76 - 144
1,1,2,2-Tetrachloroethane	20.0	18.3		ppb v/v		91	75 - 135
Tetrachloroethene	20.0	17.3		ppb v/v		87	56 - 138
Toluene	20.0	19.0		ppb v/v		95	71 - 132
1,2,4-Trichlorobenzene	20.0	20.0		ppb v/v		100	59 - 150
1,1,1-Trichloroethane	20.0	18.8		ppb v/v		94	65 - 124
1,1,2-Trichloroethane	20.0	17.5		ppb v/v		88	71 - 131
Trichloroethene	20.0	19.5		ppb v/v		98	64 - 127
Trichlorofluoromethane	20.0	18.4		ppb v/v		92	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20.7		ppb v/v		104	50 - 132
1,2,4-Trimethylbenzene	20.0	17.6		ppb v/v		88	61 - 145
1,3,5-Trimethylbenzene	20.0	17.3		ppb v/v		87	65 - 136
Vinyl acetate	20.0	22.6		ppb v/v		113	77 - 134
Vinyl chloride	20.0	19.4		ppb v/v		97	69 - 129
m,p-Xylene	40.0	32.9		ppb v/v		82	75 - 138
o-Xylene	20.0	16.8		ppb v/v		84	77 - 132
Naphthalene	20.0	21.8		ppb v/v		109	58 - 150

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	48	46.8		ug/m3		99	71 - 131
Benzene	64	63.5		ug/m3		99	68 - 128
Benzyl chloride	83	76.3		ug/m3		92	58 - 120
Bromodichloromethane	130	130		ug/m3		97	65 - 130
Bromoform	210	177		ug/m3		86	64 - 144
Bromomethane	78	75.5		ug/m3		97	70 - 131
2-Butanone (MEK)	59	61.5		ug/m3		104	71 - 131
Carbon disulfide	62	63.2		ug/m3		101	63 - 123
Carbon tetrachloride	130	119		ug/m3		94	67 - 127
Chlorobenzene	92	78.8		ug/m3		86	70 - 132
Dibromochloromethane	170	148		ug/m3		87	68 - 128
Chloroethane	53	55.0		ug/m3		104	70 - 131
Chloroform	98	95.3		ug/m3		98	69 - 129
Chloromethane	41	40.9		ug/m3		99	67 - 127

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-185620/3
Matrix: Air
Analysis Batch: 185620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	150	135		ug/m3		88	68 - 131
1,2-Dichlorobenzene	120	105		ug/m3		87	73 - 143
1,3-Dichlorobenzene	120	104		ug/m3		86	77 - 136
1,4-Dichlorobenzene	120	105		ug/m3		88	73 - 143
Dichlorodifluoromethane	99	69.6		ug/m3		70	69 - 129
1,1-Dichloroethane	81	81.6		ug/m3		101	65 - 125
1,2-Dichloroethane	81	77.2		ug/m3		95	71 - 131
1,1-Dichloroethene	79	78.4		ug/m3		99	53 - 128
cis-1,2-Dichloroethene	79	78.3		ug/m3		99	68 - 128
trans-1,2-Dichloroethene	79	79.6		ug/m3		100	70 - 130
1,2-Dichloropropane	92	90.1		ug/m3		97	74 - 128
cis-1,3-Dichloropropene	91	91.2		ug/m3		100	78 - 132
trans-1,3-Dichloropropene	91	80.0		ug/m3		88	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	132		ug/m3		95	64 - 124
Ethylbenzene	87	73.6		ug/m3		85	76 - 136
4-Ethyltoluene	98	84.4		ug/m3		86	62 - 136
Hexachlorobutadiene	210	198		ug/m3		93	42 - 150
2-Hexanone	82	78.0		ug/m3		95	70 - 128
Methylene Chloride	69	65.9		ug/m3		95	65 - 125
4-Methyl-2-pentanone (MIBK)	82	86.6		ug/m3		106	73 - 133
Styrene	85	74.3		ug/m3		87	76 - 144
1,1,2,2-Tetrachloroethane	140	125		ug/m3		91	75 - 135
Tetrachloroethene	140	117		ug/m3		87	56 - 138
Toluene	75	71.8		ug/m3		95	71 - 132
1,2,4-Trichlorobenzene	150	148		ug/m3		100	59 - 150
1,1,1-Trichloroethane	110	103		ug/m3		94	65 - 124
1,1,2-Trichloroethane	110	95.7		ug/m3		88	71 - 131
Trichloroethene	110	105		ug/m3		98	64 - 127
Trichlorofluoromethane	110	103		ug/m3		92	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	150	159		ug/m3		104	50 - 132
1,2,4-Trimethylbenzene	98	86.6		ug/m3		88	61 - 145
1,3,5-Trimethylbenzene	98	85.1		ug/m3		87	65 - 136
Vinyl acetate	70	79.6		ug/m3		113	77 - 134
Vinyl chloride	51	49.5		ug/m3		97	69 - 129
m,p-Xylene	170	143		ug/m3		82	75 - 138
o-Xylene	87	72.8		ug/m3		84	77 - 132
Naphthalene	100	114		ug/m3		109	58 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
Toluene-d8 (Surr)	111		70 - 130

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-185620/4

Matrix: Air

Analysis Batch: 185620

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	20.0	19.4		ppb v/v		97	71 - 131	1	25
Benzene	20.0	19.9		ppb v/v		99	68 - 128	0	25
Benzyl chloride	16.0	14.5		ppb v/v		91	58 - 120	2	25
Bromodichloromethane	20.0	19.2		ppb v/v		96	65 - 130	1	25
Bromoform	20.0	17.2		ppb v/v		86	64 - 144	1	25
Bromomethane	20.0	19.7		ppb v/v		98	70 - 131	1	25
2-Butanone (MEK)	20.0	20.8		ppb v/v		104	71 - 131	0	25
Carbon disulfide	20.0	20.4		ppb v/v		102	63 - 123	0	25
Carbon tetrachloride	20.0	18.8		ppb v/v		94	67 - 127	1	25
Chlorobenzene	20.0	17.2		ppb v/v		86	70 - 132	0	25
Dibromochloromethane	20.0	17.4		ppb v/v		87	68 - 128	0	25
Chloroethane	20.0	21.0		ppb v/v		105	70 - 131	1	25
Chloroform	20.0	19.5		ppb v/v		97	69 - 129	0	25
Chloromethane	20.0	20.1		ppb v/v		100	67 - 127	1	25
1,2-Dibromoethane (EDB)	20.0	17.6		ppb v/v		88	68 - 131	1	25
1,2-Dichlorobenzene	20.0	17.2		ppb v/v		86	73 - 143	1	25
1,3-Dichlorobenzene	20.0	17.1		ppb v/v		86	77 - 136	1	25
1,4-Dichlorobenzene	20.0	17.3		ppb v/v		87	73 - 143	1	25
Dichlorodifluoromethane	20.0	18.2		ppb v/v		91	69 - 129	25	25
1,1-Dichloroethane	20.0	20.2		ppb v/v		101	65 - 125	0	25
1,2-Dichloroethane	20.0	18.9		ppb v/v		95	71 - 131	1	25
1,1-Dichloroethene	20.0	19.9		ppb v/v		99	53 - 128	1	25
cis-1,2-Dichloroethene	20.0	19.8		ppb v/v		99	68 - 128	0	25
trans-1,2-Dichloroethene	20.0	20.2		ppb v/v		101	70 - 130	1	25
1,2-Dichloropropane	20.0	19.3		ppb v/v		97	74 - 128	1	25
cis-1,3-Dichloropropene	20.0	20.3		ppb v/v		101	78 - 132	1	25
trans-1,3-Dichloropropene	20.0	17.7		ppb v/v		88	56 - 136	0	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	19.2		ppb v/v		96	64 - 124	1	25
Ethylbenzene	20.0	17.2		ppb v/v		86	76 - 136	1	25
4-Ethyltoluene	20.0	17.3		ppb v/v		86	62 - 136	1	25
Hexachlorobutadiene	20.0	18.4		ppb v/v		92	42 - 150	1	25
2-Hexanone	20.0	19.1		ppb v/v		95	70 - 128	0	25
Methylene Chloride	20.0	19.1		ppb v/v		95	65 - 125	1	25
4-Methyl-2-pentanone (MIBK)	20.0	20.9		ppb v/v		104	73 - 133	1	25
Styrene	20.0	17.7		ppb v/v		88	76 - 144	1	25
1,1,1,2-Tetrachloroethane	20.0	18.2		ppb v/v		91	75 - 135	0	25
Tetrachloroethene	20.0	17.5		ppb v/v		88	56 - 138	1	25
Toluene	20.0	19.2		ppb v/v		96	71 - 132	1	25
1,2,4-Trichlorobenzene	20.0	19.9		ppb v/v		99	59 - 150	0	25
1,1,1-Trichloroethane	20.0	18.9		ppb v/v		94	65 - 124	0	25
1,1,2-Trichloroethane	20.0	17.6		ppb v/v		88	71 - 131	1	25
Trichloroethene	20.0	19.4		ppb v/v		97	64 - 127	1	25
Trichlorofluoromethane	20.0	18.3		ppb v/v		92	68 - 128	0	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20.8		ppb v/v		104	50 - 132	1	25
1,2,4-Trimethylbenzene	20.0	17.5		ppb v/v		87	61 - 145	1	25
1,3,5-Trimethylbenzene	20.0	17.4		ppb v/v		87	65 - 136	0	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-185620/4

Matrix: Air

Analysis Batch: 185620

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl acetate	20.0	22.4		ppb v/v		112	77 - 134	1	25
Vinyl chloride	20.0	19.7		ppb v/v		99	69 - 129	2	25
m,p-Xylene	40.0	33.4		ppb v/v		83	75 - 138	2	25
o-Xylene	20.0	16.9		ppb v/v		85	77 - 132	1	25
Naphthalene	20.0	21.9		ppb v/v		109	58 - 150	0	25
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	48	46.2		ug/m3		97	71 - 131	1	25
Benzene	64	63.5		ug/m3		99	68 - 128	0	25
Benzyl chloride	83	75.1		ug/m3		91	58 - 120	2	25
Bromodichloromethane	130	129		ug/m3		96	65 - 130	1	25
Bromoform	210	178		ug/m3		86	64 - 144	1	25
Bromomethane	78	76.4		ug/m3		98	70 - 131	1	25
2-Butanone (MEK)	59	61.3		ug/m3		104	71 - 131	0	25
Carbon disulfide	62	63.5		ug/m3		102	63 - 123	0	25
Carbon tetrachloride	130	118		ug/m3		94	67 - 127	1	25
Chlorobenzene	92	79.0		ug/m3		86	70 - 132	0	25
Dibromochloromethane	170	149		ug/m3		87	68 - 128	0	25
Chloroethane	53	55.5		ug/m3		105	70 - 131	1	25
Chloroform	98	95.1		ug/m3		97	69 - 129	0	25
Chloromethane	41	41.5		ug/m3		100	67 - 127	1	25
1,2-Dibromoethane (EDB)	150	135		ug/m3		88	68 - 131	1	25
1,2-Dichlorobenzene	120	104		ug/m3		86	73 - 143	1	25
1,3-Dichlorobenzene	120	103		ug/m3		86	77 - 136	1	25
1,4-Dichlorobenzene	120	104		ug/m3		87	73 - 143	1	25
Dichlorodifluoromethane	99	89.9		ug/m3		91	69 - 129	25	25
1,1-Dichloroethane	81	81.9		ug/m3		101	65 - 125	0	25
1,2-Dichloroethane	81	76.7		ug/m3		95	71 - 131	1	25
1,1-Dichloroethene	79	78.9		ug/m3		99	53 - 128	1	25
cis-1,2-Dichloroethene	79	78.4		ug/m3		99	68 - 128	0	25
trans-1,2-Dichloroethene	79	80.0		ug/m3		101	70 - 130	1	25
1,2-Dichloropropane	92	89.2		ug/m3		97	74 - 128	1	25
cis-1,3-Dichloropropene	91	92.0		ug/m3		101	78 - 132	1	25
trans-1,3-Dichloropropene	91	80.3		ug/m3		88	56 - 136	0	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	134		ug/m3		96	64 - 124	1	25
Ethylbenzene	87	74.6		ug/m3		86	76 - 136	1	25
4-Ethyltoluene	98	85.0		ug/m3		86	62 - 136	1	25
Hexachlorobutadiene	210	196		ug/m3		92	42 - 150	1	25
2-Hexanone	82	78.2		ug/m3		95	70 - 128	0	25
Methylene Chloride	69	66.3		ug/m3		95	65 - 125	1	25
4-Methyl-2-pentanone (MIBK)	82	85.6		ug/m3		104	73 - 133	1	25
Styrene	85	75.3		ug/m3		88	76 - 144	1	25
1,1,2,2-Tetrachloroethane	140	125		ug/m3		91	75 - 135	0	25
Tetrachloroethene	140	119		ug/m3		88	56 - 138	1	25
Toluene	75	72.4		ug/m3		96	71 - 132	1	25
1,2,4-Trichlorobenzene	150	147		ug/m3		99	59 - 150	0	25
1,1,1-Trichloroethane	110	103		ug/m3		94	65 - 124	0	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-185620/4
Matrix: Air
Analysis Batch: 185620

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichloroethane	110	96.2		ug/m3		88	71 - 131	1	25
Trichloroethene	110	104		ug/m3		97	64 - 127	1	25
Trichlorofluoromethane	110	103		ug/m3		92	68 - 128	0	25
1,1,2-Trichloro-1,2,2-trifluoroethane	150	160		ug/m3		104	50 - 132	1	25
1,2,4-Trimethylbenzene	98	85.9		ug/m3		87	61 - 145	1	25
1,3,5-Trimethylbenzene	98	85.4		ug/m3		87	65 - 136	0	25
Vinyl acetate	70	79.0		ug/m3		112	77 - 134	1	25
Vinyl chloride	51	50.4		ug/m3		99	69 - 129	2	25
m,p-Xylene	170	145		ug/m3		83	75 - 138	2	25
o-Xylene	87	73.5		ug/m3		85	77 - 132	1	25
Naphthalene	100	115		ug/m3		109	58 - 150	0	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
Toluene-d8 (Surr)	111		70 - 130

Lab Sample ID: MB 320-185823/6
Matrix: Air
Analysis Batch: 185823

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	ppb v/v			09/22/17 13:42	1
Benzene	ND		0.40	ppb v/v			09/22/17 13:42	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 13:42	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 13:42	1
Bromoform	ND		0.40	ppb v/v			09/22/17 13:42	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 13:42	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/22/17 13:42	1
Carbon disulfide	ND		0.80	ppb v/v			09/22/17 13:42	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 13:42	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 13:42	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 13:42	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 13:42	1
Chloroform	ND		0.30	ppb v/v			09/22/17 13:42	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 13:42	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 13:42	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 13:42	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 13:42	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 13:42	1
Dichlorodifluoromethane	ND		0.40	ppb v/v			09/22/17 13:42	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 13:42	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 13:42	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 13:42	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 13:42	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 13:42	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 13:42	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-185823/6
Matrix: Air
Analysis Batch: 185823

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 13:42	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 13:42	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 13:42	1
Ethylbenzene	ND		0.40	ppb v/v			09/22/17 13:42	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 13:42	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 13:42	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 13:42	1
Methylene Chloride	ND		0.40	ppb v/v			09/22/17 13:42	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 13:42	1
Styrene	ND		0.40	ppb v/v			09/22/17 13:42	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 13:42	1
Tetrachloroethene	ND		0.40	ppb v/v			09/22/17 13:42	1
Toluene	ND		0.40	ppb v/v			09/22/17 13:42	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 13:42	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 13:42	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 13:42	1
Trichloroethene	ND		0.40	ppb v/v			09/22/17 13:42	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/22/17 13:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 13:42	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 13:42	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 13:42	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 13:42	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 13:42	1
m,p-Xylene	ND		0.80	ppb v/v			09/22/17 13:42	1
o-Xylene	ND		0.40	ppb v/v			09/22/17 13:42	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 13:42	1

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		12	ug/m3			09/22/17 13:42	1
Benzene	ND		1.3	ug/m3			09/22/17 13:42	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 13:42	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 13:42	1
Bromoform	ND		4.1	ug/m3			09/22/17 13:42	1
Bromomethane	ND		3.1	ug/m3			09/22/17 13:42	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/22/17 13:42	1
Carbon disulfide	ND		2.5	ug/m3			09/22/17 13:42	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 13:42	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 13:42	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 13:42	1
Chloroethane	ND		2.1	ug/m3			09/22/17 13:42	1
Chloroform	ND		1.5	ug/m3			09/22/17 13:42	1
Chloromethane	ND		1.7	ug/m3			09/22/17 13:42	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 13:42	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 13:42	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 13:42	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 13:42	1
Dichlorodifluoromethane	ND		2.0	ug/m3			09/22/17 13:42	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 13:42	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-185823/6
Matrix: Air
Analysis Batch: 185823

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 13:42	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 13:42	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 13:42	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 13:42	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 13:42	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 13:42	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 13:42	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 13:42	1
Ethylbenzene	ND		1.7	ug/m3			09/22/17 13:42	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 13:42	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 13:42	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 13:42	1
Methylene Chloride	ND		1.4	ug/m3			09/22/17 13:42	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 13:42	1
Styrene	ND		1.7	ug/m3			09/22/17 13:42	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 13:42	1
Tetrachloroethene	ND		2.7	ug/m3			09/22/17 13:42	1
Toluene	ND		1.5	ug/m3			09/22/17 13:42	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 13:42	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 13:42	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 13:42	1
Trichloroethene	ND		2.1	ug/m3			09/22/17 13:42	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/22/17 13:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 13:42	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 13:42	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 13:42	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 13:42	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 13:42	1
m,p-Xylene	ND		3.5	ug/m3			09/22/17 13:42	1
o-Xylene	ND		1.7	ug/m3			09/22/17 13:42	1
Naphthalene	ND		4.2	ug/m3			09/22/17 13:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130		09/22/17 13:42	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 130		09/22/17 13:42	1
Toluene-d8 (Surr)	101		70 - 130		09/22/17 13:42	1

Lab Sample ID: LCS 320-185823/3
Matrix: Air
Analysis Batch: 185823

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	16.6		ppb v/v		83	71 - 131
Benzene	20.0	18.7		ppb v/v		93	68 - 128
Benzyl chloride	16.0	17.2		ppb v/v		107	58 - 120
Bromodichloromethane	20.0	19.7		ppb v/v		98	65 - 130
Bromoform	20.0	18.6		ppb v/v		93	64 - 144
Bromomethane	20.0	20.1		ppb v/v		100	70 - 131

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-185823/3

Matrix: Air

Analysis Batch: 185823

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Butanone (MEK)	20.0	19.7		ppb v/v		99	71 - 131
Carbon disulfide	20.0	20.6		ppb v/v		103	63 - 123
Carbon tetrachloride	20.0	19.4		ppb v/v		97	67 - 127
Chlorobenzene	20.0	17.2		ppb v/v		86	70 - 132
Dibromochloromethane	20.0	20.1		ppb v/v		100	68 - 128
Chloroethane	20.0	20.0		ppb v/v		100	70 - 131
Chloroform	20.0	18.6		ppb v/v		93	69 - 129
Chloromethane	20.0	18.2		ppb v/v		91	67 - 127
1,2-Dibromoethane (EDB)	20.0	16.5		ppb v/v		83	68 - 131
1,2-Dichlorobenzene	20.0	18.8		ppb v/v		94	73 - 143
1,3-Dichlorobenzene	20.0	16.4		ppb v/v		82	77 - 136
1,4-Dichlorobenzene	20.0	16.6		ppb v/v		83	73 - 143
Dichlorodifluoromethane	20.0	21.6		ppb v/v		108	69 - 129
1,1-Dichloroethane	20.0	18.6		ppb v/v		93	65 - 125
1,2-Dichloroethane	20.0	19.0		ppb v/v		95	71 - 131
1,1-Dichloroethene	20.0	21.4		ppb v/v		107	53 - 128
cis-1,2-Dichloroethene	20.0	19.3		ppb v/v		96	68 - 128
trans-1,2-Dichloroethene	20.0	19.7		ppb v/v		98	70 - 130
1,2-Dichloropropane	20.0	15.5		ppb v/v		78	74 - 128
cis-1,3-Dichloropropene	20.0	18.9		ppb v/v		94	78 - 132
trans-1,3-Dichloropropene	20.0	15.6		ppb v/v		78	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	21.5		ppb v/v		108	64 - 124
Ethylbenzene	20.0	16.5		ppb v/v		83	76 - 136
4-Ethyltoluene	20.0	21.1		ppb v/v		106	62 - 136
Hexachlorobutadiene	20.0	18.4		ppb v/v		92	42 - 150
2-Hexanone	20.0	20.7		ppb v/v		103	70 - 128
Methylene Chloride	20.0	18.4		ppb v/v		92	65 - 125
4-Methyl-2-pentanone (MIBK)	20.0	21.3		ppb v/v		107	73 - 133
Styrene	20.0	18.0		ppb v/v		90	76 - 144
1,1,2,2-Tetrachloroethane	20.0	18.8		ppb v/v		94	75 - 135
Tetrachloroethene	20.0	19.6		ppb v/v		98	56 - 138
Toluene	20.0	14.3		ppb v/v		71	71 - 132
1,2,4-Trichlorobenzene	20.0	20.4		ppb v/v		102	59 - 150
1,1,1-Trichloroethane	20.0	19.0		ppb v/v		95	65 - 124
1,1,2-Trichloroethane	20.0	15.0		ppb v/v		75	71 - 131
Trichloroethene	20.0	20.9		ppb v/v		104	64 - 127
Trichlorofluoromethane	20.0	21.2		ppb v/v		106	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20.3		ppb v/v		101	50 - 132
1,2,4-Trimethylbenzene	20.0	22.9		ppb v/v		115	61 - 145
1,3,5-Trimethylbenzene	20.0	21.1		ppb v/v		106	65 - 136
Vinyl acetate	20.0	16.4		ppb v/v		82	77 - 134
Vinyl chloride	20.0	20.0		ppb v/v		100	69 - 129
m,p-Xylene	40.0	35.5		ppb v/v		89	75 - 138
o-Xylene	20.0	18.4		ppb v/v		92	77 - 132
Naphthalene	20.0	20.9		ppb v/v		105	58 - 150

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	48	39.4		ug/m3		83	71 - 131
Benzene	64	59.7		ug/m3		93	68 - 128
Benzyl chloride	83	88.8		ug/m3		107	58 - 120
Bromodichloromethane	130	132		ug/m3		98	65 - 130
Bromoform	210	192		ug/m3		93	64 - 144
Bromomethane	78	78.0		ug/m3		100	70 - 131
2-Butanone (MEK)	59	58.2		ug/m3		99	71 - 131
Carbon disulfide	62	64.2		ug/m3		103	63 - 123
Carbon tetrachloride	130	122		ug/m3		97	67 - 127
Chlorobenzene	92	79.1		ug/m3		86	70 - 132
Dibromochloromethane	170	171		ug/m3		100	68 - 128
Chloroethane	53	52.7		ug/m3		100	70 - 131
Chloroform	98	91.0		ug/m3		93	69 - 129
Chloromethane	41	37.5		ug/m3		91	67 - 127
1,2-Dibromoethane (EDB)	150	127		ug/m3		83	68 - 131
1,2-Dichlorobenzene	120	113		ug/m3		94	73 - 143
1,3-Dichlorobenzene	120	98.4		ug/m3		82	77 - 136
1,4-Dichlorobenzene	120	100		ug/m3		83	73 - 143
Dichlorodifluoromethane	99	107		ug/m3		108	69 - 129
1,1-Dichloroethane	81	75.3		ug/m3		93	65 - 125
1,2-Dichloroethane	81	76.9		ug/m3		95	71 - 131
1,1-Dichloroethene	79	84.7		ug/m3		107	53 - 128
cis-1,2-Dichloroethene	79	76.5		ug/m3		96	68 - 128
trans-1,2-Dichloroethene	79	77.9		ug/m3		98	70 - 130
1,2-Dichloropropane	92	71.8		ug/m3		78	74 - 128
cis-1,3-Dichloropropene	91	85.6		ug/m3		94	78 - 132
trans-1,3-Dichloropropene	91	70.7		ug/m3		78	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	151		ug/m3		108	64 - 124
Ethylbenzene	87	71.8		ug/m3		83	76 - 136
4-Ethyltoluene	98	104		ug/m3		106	62 - 136
Hexachlorobutadiene	210	196		ug/m3		92	42 - 150
2-Hexanone	82	84.7		ug/m3		103	70 - 128
Methylene Chloride	69	63.7		ug/m3		92	65 - 125
4-Methyl-2-pentanone (MIBK)	82	87.3		ug/m3		107	73 - 133
Styrene	85	76.7		ug/m3		90	76 - 144
1,1,2,2-Tetrachloroethane	140	129		ug/m3		94	75 - 135
Tetrachloroethene	140	133		ug/m3		98	56 - 138
Toluene	75	53.8		ug/m3		71	71 - 132
1,2,4-Trichlorobenzene	150	152		ug/m3		102	59 - 150
1,1,1-Trichloroethane	110	104		ug/m3		95	65 - 124
1,1,2-Trichloroethane	110	81.6		ug/m3		75	71 - 131
Trichloroethene	110	112		ug/m3		104	64 - 127
Trichlorofluoromethane	110	119		ug/m3		106	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	150	155		ug/m3		101	50 - 132
1,2,4-Trimethylbenzene	98	113		ug/m3		115	61 - 145
1,3,5-Trimethylbenzene	98	104		ug/m3		106	65 - 136
Vinyl acetate	70	57.7		ug/m3		82	77 - 134
Vinyl chloride	51	51.0		ug/m3		100	69 - 129
m,p-Xylene	170	154		ug/m3		89	75 - 138
o-Xylene	87	79.8		ug/m3		92	77 - 132
Naphthalene	100	110		ug/m3		105	58 - 150

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-185823/3
Matrix: Air
Analysis Batch: 185823

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 320-185823/4
Matrix: Air
Analysis Batch: 185823

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	20.0	15.6		ppb v/v		78	71 - 131	6	25
Benzene	20.0	19.4		ppb v/v		97	68 - 128	4	25
Benzyl chloride	16.0	18.4		ppb v/v		115	58 - 120	7	25
Bromodichloromethane	20.0	21.0		ppb v/v		105	65 - 130	6	25
Bromoform	20.0	18.7		ppb v/v		94	64 - 144	1	25
Bromomethane	20.0	18.7		ppb v/v		94	70 - 131	7	25
2-Butanone (MEK)	20.0	20.0		ppb v/v		100	71 - 131	1	25
Carbon disulfide	20.0	19.0		ppb v/v		95	63 - 123	8	25
Carbon tetrachloride	20.0	20.2		ppb v/v		101	67 - 127	4	25
Chlorobenzene	20.0	17.3		ppb v/v		86	70 - 132	0	25
Dibromochloromethane	20.0	20.6		ppb v/v		103	68 - 128	3	25
Chloroethane	20.0	18.1		ppb v/v		91	70 - 131	9	25
Chloroform	20.0	18.6		ppb v/v		93	69 - 129	0	25
Chloromethane	20.0	18.3		ppb v/v		92	67 - 127	1	25
1,2-Dibromoethane (EDB)	20.0	16.4		ppb v/v		82	68 - 131	1	25
1,2-Dichlorobenzene	20.0	19.9		ppb v/v		100	73 - 143	6	25
1,3-Dichlorobenzene	20.0	17.2		ppb v/v		86	77 - 136	5	25
1,4-Dichlorobenzene	20.0	17.6		ppb v/v		88	73 - 143	5	25
Dichlorodifluoromethane	20.0	22.1		ppb v/v		110	69 - 129	2	25
1,1-Dichloroethane	20.0	18.4		ppb v/v		92	65 - 125	1	25
1,2-Dichloroethane	20.0	19.5		ppb v/v		98	71 - 131	3	25
1,1-Dichloroethene	20.0	19.8		ppb v/v		99	53 - 128	8	25
cis-1,2-Dichloroethene	20.0	19.1		ppb v/v		95	68 - 128	1	25
trans-1,2-Dichloroethene	20.0	18.9		ppb v/v		94	70 - 130	4	25
1,2-Dichloropropane	20.0	15.6		ppb v/v		78	74 - 128	0	25
cis-1,3-Dichloropropene	20.0	19.7		ppb v/v		98	78 - 132	4	25
trans-1,3-Dichloropropene	20.0	15.8		ppb v/v		79	56 - 136	1	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	20.0		ppb v/v		100	64 - 124	7	25
Ethylbenzene	20.0	17.8		ppb v/v		89	76 - 136	7	25
4-Ethyltoluene	20.0	22.5		ppb v/v		112	62 - 136	6	25
Hexachlorobutadiene	20.0	19.6		ppb v/v		98	42 - 150	6	25
2-Hexanone	20.0	22.1		ppb v/v		111	70 - 128	7	25
Methylene Chloride	20.0	17.3		ppb v/v		86	65 - 125	6	25
4-Methyl-2-pentanone (MIBK)	20.0	23.7		ppb v/v		119	73 - 133	11	25
Styrene	20.0	19.2		ppb v/v		96	76 - 144	6	25
1,1,2,2-Tetrachloroethane	20.0	20.0		ppb v/v		100	75 - 135	6	25
Tetrachloroethene	20.0	20.2		ppb v/v		101	56 - 138	3	25
Toluene	20.0	15.3		ppb v/v		76	71 - 132	7	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-185823/4
Matrix: Air
Analysis Batch: 185823

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	20.0	21.9		ppb v/v		110	59 - 150	7	25
1,1,1-Trichloroethane	20.0	19.0		ppb v/v		95	65 - 124	0	25
1,1,2-Trichloroethane	20.0	15.1		ppb v/v		76	71 - 131	1	25
Trichloroethene	20.0	21.9		ppb v/v		109	64 - 127	5	25
Trichlorofluoromethane	20.0	19.6		ppb v/v		98	68 - 128	8	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	19.0		ppb v/v		95	50 - 132	6	25
1,2,4-Trimethylbenzene	20.0	21.8		ppb v/v		109	61 - 145	5	25
1,3,5-Trimethylbenzene	20.0	22.4		ppb v/v		112	65 - 136	6	25
Vinyl acetate	20.0	15.7		ppb v/v		78	77 - 134	4	25
Vinyl chloride	20.0	19.3		ppb v/v		97	69 - 129	3	25
m,p-Xylene	40.0	38.0		ppb v/v		95	75 - 138	7	25
o-Xylene	20.0	19.6		ppb v/v		98	77 - 132	6	25
Naphthalene	20.0	22.4		ppb v/v		112	58 - 150	7	25
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	48	37.0		ug/m3		78	71 - 131	6	25
Benzene	64	62.1		ug/m3		97	68 - 128	4	25
Benzyl chloride	83	95.1		ug/m3		115	58 - 120	7	25
Bromodichloromethane	130	140		ug/m3		105	65 - 130	6	25
Bromoform	210	194		ug/m3		94	64 - 144	1	25
Bromomethane	78	72.7		ug/m3		94	70 - 131	7	25
2-Butanone (MEK)	59	59.0		ug/m3		100	71 - 131	1	25
Carbon disulfide	62	59.2		ug/m3		95	63 - 123	8	25
Carbon tetrachloride	130	127		ug/m3		101	67 - 127	4	25
Chlorobenzene	92	79.4		ug/m3		86	70 - 132	0	25
Dibromochloromethane	170	176		ug/m3		103	68 - 128	3	25
Chloroethane	53	47.9		ug/m3		91	70 - 131	9	25
Chloroform	98	90.6		ug/m3		93	69 - 129	0	25
Chloromethane	41	37.9		ug/m3		92	67 - 127	1	25
1,2-Dibromoethane (EDB)	150	126		ug/m3		82	68 - 131	1	25
1,2-Dichlorobenzene	120	120		ug/m3		100	73 - 143	6	25
1,3-Dichlorobenzene	120	104		ug/m3		86	77 - 136	5	25
1,4-Dichlorobenzene	120	106		ug/m3		88	73 - 143	5	25
Dichlorodifluoromethane	99	109		ug/m3		110	69 - 129	2	25
1,1-Dichloroethane	81	74.4		ug/m3		92	65 - 125	1	25
1,2-Dichloroethane	81	79.0		ug/m3		98	71 - 131	3	25
1,1-Dichloroethene	79	78.5		ug/m3		99	53 - 128	8	25
cis-1,2-Dichloroethene	79	75.7		ug/m3		95	68 - 128	1	25
trans-1,2-Dichloroethene	79	74.8		ug/m3		94	70 - 130	4	25
1,2-Dichloropropane	92	72.1		ug/m3		78	74 - 128	0	25
cis-1,3-Dichloropropene	91	89.4		ug/m3		98	78 - 132	4	25
trans-1,3-Dichloropropene	91	71.6		ug/m3		79	56 - 136	1	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	140		ug/m3		100	64 - 124	7	25
Ethylbenzene	87	77.1		ug/m3		89	76 - 136	7	25
4-Ethyltoluene	98	111		ug/m3		112	62 - 136	6	25
Hexachlorobutadiene	210	209		ug/m3		98	42 - 150	6	25
2-Hexanone	82	90.8		ug/m3		111	70 - 128	7	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-185823/4
Matrix: Air
Analysis Batch: 185823

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methylene Chloride	69	59.9		ug/m3		86	65 - 125	6	25
4-Methyl-2-pentanone (MIBK)	82	97.3		ug/m3		119	73 - 133	11	25
Styrene	85	81.8		ug/m3		96	76 - 144	6	25
1,1,2,2-Tetrachloroethane	140	137		ug/m3		100	75 - 135	6	25
Tetrachloroethene	140	137		ug/m3		101	56 - 138	3	25
Toluene	75	57.6		ug/m3		76	71 - 132	7	25
1,2,4-Trichlorobenzene	150	163		ug/m3		110	59 - 150	7	25
1,1,1-Trichloroethane	110	104		ug/m3		95	65 - 124	0	25
1,1,2-Trichloroethane	110	82.6		ug/m3		76	71 - 131	1	25
Trichloroethene	110	117		ug/m3		109	64 - 127	5	25
Trichlorofluoromethane	110	110		ug/m3		98	68 - 128	8	25
1,1,2-Trichloro-1,2,2-trifluoroethane	150	146		ug/m3		95	50 - 132	6	25
1,2,4-Trimethylbenzene	98	107		ug/m3		109	61 - 145	5	25
1,3,5-Trimethylbenzene	98	110		ug/m3		112	65 - 136	6	25
Vinyl acetate	70	55.3		ug/m3		78	77 - 134	4	25
Vinyl chloride	51	49.4		ug/m3		97	69 - 129	3	25
m,p-Xylene	170	165		ug/m3		95	75 - 138	7	25
o-Xylene	87	85.2		ug/m3		98	77 - 132	6	25
Naphthalene	100	117		ug/m3		112	58 - 150	7	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
Toluene-d8 (Surr)	102		70 - 130

Lab Sample ID: MB 320-185826/6
Matrix: Air
Analysis Batch: 185826

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	ppb v/v			09/22/17 17:20	1
Benzene	ND		0.40	ppb v/v			09/22/17 17:20	1
Benzyl chloride	ND		0.80	ppb v/v			09/22/17 17:20	1
Bromodichloromethane	ND		0.30	ppb v/v			09/22/17 17:20	1
Bromoform	ND		0.40	ppb v/v			09/22/17 17:20	1
Bromomethane	ND		0.80	ppb v/v			09/22/17 17:20	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/22/17 17:20	1
Carbon disulfide	ND		0.80	ppb v/v			09/22/17 17:20	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/22/17 17:20	1
Chlorobenzene	ND		0.30	ppb v/v			09/22/17 17:20	1
Dibromochloromethane	ND		0.40	ppb v/v			09/22/17 17:20	1
Chloroethane	ND		0.80	ppb v/v			09/22/17 17:20	1
Chloroform	ND		0.30	ppb v/v			09/22/17 17:20	1
Chloromethane	ND		0.80	ppb v/v			09/22/17 17:20	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/22/17 17:20	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 17:20	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 17:20	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-185826/6
Matrix: Air
Analysis Batch: 185826

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/22/17 17:20	1
Dichlorodifluoromethane	ND		0.40	ppb v/v			09/22/17 17:20	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/22/17 17:20	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/22/17 17:20	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/22/17 17:20	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 17:20	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/22/17 17:20	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/22/17 17:20	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 17:20	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/22/17 17:20	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/22/17 17:20	1
Ethylbenzene	ND		0.40	ppb v/v			09/22/17 17:20	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/22/17 17:20	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/22/17 17:20	1
2-Hexanone	ND		0.40	ppb v/v			09/22/17 17:20	1
Methylene Chloride	ND		0.40	ppb v/v			09/22/17 17:20	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/22/17 17:20	1
Styrene	ND		0.40	ppb v/v			09/22/17 17:20	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/22/17 17:20	1
Tetrachloroethene	ND		0.40	ppb v/v			09/22/17 17:20	1
Toluene	ND		0.40	ppb v/v			09/22/17 17:20	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/22/17 17:20	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/22/17 17:20	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/22/17 17:20	1
Trichloroethene	ND		0.40	ppb v/v			09/22/17 17:20	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/22/17 17:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/22/17 17:20	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/22/17 17:20	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/22/17 17:20	1
Vinyl acetate	ND		0.80	ppb v/v			09/22/17 17:20	1
Vinyl chloride	ND		0.40	ppb v/v			09/22/17 17:20	1
m,p-Xylene	ND		0.80	ppb v/v			09/22/17 17:20	1
o-Xylene	ND		0.40	ppb v/v			09/22/17 17:20	1
Naphthalene	ND		0.80	ppb v/v			09/22/17 17:20	1
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		12	ug/m3			09/22/17 17:20	1
Benzene	ND		1.3	ug/m3			09/22/17 17:20	1
Benzyl chloride	ND		4.1	ug/m3			09/22/17 17:20	1
Bromodichloromethane	ND		2.0	ug/m3			09/22/17 17:20	1
Bromoform	ND		4.1	ug/m3			09/22/17 17:20	1
Bromomethane	ND		3.1	ug/m3			09/22/17 17:20	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/22/17 17:20	1
Carbon disulfide	ND		2.5	ug/m3			09/22/17 17:20	1
Carbon tetrachloride	ND		5.0	ug/m3			09/22/17 17:20	1
Chlorobenzene	ND		1.4	ug/m3			09/22/17 17:20	1
Dibromochloromethane	ND		3.4	ug/m3			09/22/17 17:20	1
Chloroethane	ND		2.1	ug/m3			09/22/17 17:20	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-185826/6
Matrix: Air
Analysis Batch: 185826

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		1.5	ug/m3			09/22/17 17:20	1
Chloromethane	ND		1.7	ug/m3			09/22/17 17:20	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/22/17 17:20	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 17:20	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 17:20	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/22/17 17:20	1
Dichlorodifluoromethane	ND		2.0	ug/m3			09/22/17 17:20	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/22/17 17:20	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/22/17 17:20	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/22/17 17:20	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 17:20	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/22/17 17:20	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/22/17 17:20	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 17:20	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/22/17 17:20	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/22/17 17:20	1
Ethylbenzene	ND		1.7	ug/m3			09/22/17 17:20	1
4-Ethyltoluene	ND		2.0	ug/m3			09/22/17 17:20	1
Hexachlorobutadiene	ND		21	ug/m3			09/22/17 17:20	1
2-Hexanone	ND		1.6	ug/m3			09/22/17 17:20	1
Methylene Chloride	ND		1.4	ug/m3			09/22/17 17:20	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/22/17 17:20	1
Styrene	ND		1.7	ug/m3			09/22/17 17:20	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/22/17 17:20	1
Tetrachloroethene	ND		2.7	ug/m3			09/22/17 17:20	1
Toluene	ND		1.5	ug/m3			09/22/17 17:20	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/22/17 17:20	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/22/17 17:20	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/22/17 17:20	1
Trichloroethene	ND		2.1	ug/m3			09/22/17 17:20	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/22/17 17:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/22/17 17:20	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/22/17 17:20	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/22/17 17:20	1
Vinyl acetate	ND		2.8	ug/m3			09/22/17 17:20	1
Vinyl chloride	ND		1.0	ug/m3			09/22/17 17:20	1
m,p-Xylene	ND		3.5	ug/m3			09/22/17 17:20	1
o-Xylene	ND		1.7	ug/m3			09/22/17 17:20	1
Naphthalene	ND		4.2	ug/m3			09/22/17 17:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130		09/22/17 17:20	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		09/22/17 17:20	1
Toluene-d8 (Surr)	115		70 - 130		09/22/17 17:20	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-185826/3

Matrix: Air

Analysis Batch: 185826

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	19.1		ppb v/v		96	71 - 131
Benzene	20.0	19.4		ppb v/v		97	68 - 128
Benzyl chloride	16.0	13.7		ppb v/v		86	58 - 120
Bromodichloromethane	20.0	19.0		ppb v/v		95	65 - 130
Bromoform	20.0	16.2		ppb v/v		81	64 - 144
Bromomethane	20.0	19.0		ppb v/v		95	70 - 131
2-Butanone (MEK)	20.0	20.3		ppb v/v		101	71 - 131
Carbon disulfide	20.0	19.7		ppb v/v		99	63 - 123
Carbon tetrachloride	20.0	18.2		ppb v/v		91	67 - 127
Chlorobenzene	20.0	16.2		ppb v/v		81	70 - 132
Dibromochloromethane	20.0	16.5		ppb v/v		83	68 - 128
Chloroethane	20.0	20.4		ppb v/v		102	70 - 131
Chloroform	20.0	18.9		ppb v/v		95	69 - 129
Chloromethane	20.0	19.5		ppb v/v		98	67 - 127
1,2-Dibromoethane (EDB)	20.0	16.6		ppb v/v		83	68 - 131
1,2-Dichlorobenzene	20.0	16.3		ppb v/v		81	73 - 143
1,3-Dichlorobenzene	20.0	16.3		ppb v/v		81	77 - 136
1,4-Dichlorobenzene	20.0	16.4		ppb v/v		82	73 - 143
Dichlorodifluoromethane	20.0	17.8		ppb v/v		89	69 - 129
1,1-Dichloroethane	20.0	19.7		ppb v/v		99	65 - 125
1,2-Dichloroethane	20.0	18.6		ppb v/v		93	71 - 131
1,1-Dichloroethene	20.0	19.5		ppb v/v		98	53 - 128
cis-1,2-Dichloroethene	20.0	19.3		ppb v/v		96	68 - 128
trans-1,2-Dichloroethene	20.0	19.6		ppb v/v		98	70 - 130
1,2-Dichloropropane	20.0	18.8		ppb v/v		94	74 - 128
cis-1,3-Dichloropropene	20.0	19.7		ppb v/v		98	78 - 132
trans-1,3-Dichloropropene	20.0	16.8		ppb v/v		84	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	18.5		ppb v/v		92	64 - 124
Ethylbenzene	20.0	16.1		ppb v/v		81	76 - 136
4-Ethyltoluene	20.0	16.3		ppb v/v		82	62 - 136
Hexachlorobutadiene	20.0	17.2		ppb v/v		86	42 - 150
2-Hexanone	20.0	18.2		ppb v/v		91	70 - 128
Methylene Chloride	20.0	18.8		ppb v/v		94	65 - 125
4-Methyl-2-pentanone (MIBK)	20.0	20.6		ppb v/v		103	73 - 133
Styrene	20.0	16.6		ppb v/v		83	76 - 144
1,1,2,2-Tetrachloroethane	20.0	17.2		ppb v/v		86	75 - 135
Tetrachloroethene	20.0	16.6		ppb v/v		83	56 - 138
Toluene	20.0	18.8		ppb v/v		94	71 - 132
1,2,4-Trichlorobenzene	20.0	18.2		ppb v/v		91	59 - 150
1,1,1-Trichloroethane	20.0	18.4		ppb v/v		92	65 - 124
1,1,2-Trichloroethane	20.0	16.8		ppb v/v		84	71 - 131
Trichloroethene	20.0	19.0		ppb v/v		95	64 - 127
Trichlorofluoromethane	20.0	17.8		ppb v/v		89	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20.1		ppb v/v		101	50 - 132
1,2,4-Trimethylbenzene	20.0	16.6		ppb v/v		83	61 - 145
1,3,5-Trimethylbenzene	20.0	16.4		ppb v/v		82	65 - 136

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-185826/3
Matrix: Air
Analysis Batch: 185826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl acetate	20.0	22.2		ppb v/v		111	77 - 134
Vinyl chloride	20.0	19.1		ppb v/v		96	69 - 129
m,p-Xylene	40.0	31.5		ppb v/v		79	75 - 138
o-Xylene	20.0	15.9		ppb v/v		79	77 - 132
Naphthalene	20.0	19.9		ppb v/v		99	58 - 150
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	48	45.4		ug/m3		96	71 - 131
Benzene	64	62.0		ug/m3		97	68 - 128
Benzyl chloride	83	71.1		ug/m3		86	58 - 120
Bromodichloromethane	130	127		ug/m3		95	65 - 130
Bromoform	210	168		ug/m3		81	64 - 144
Bromomethane	78	73.9		ug/m3		95	70 - 131
2-Butanone (MEK)	59	59.9		ug/m3		101	71 - 131
Carbon disulfide	62	61.5		ug/m3		99	63 - 123
Carbon tetrachloride	130	115		ug/m3		91	67 - 127
Chlorobenzene	92	74.8		ug/m3		81	70 - 132
Dibromochloromethane	170	141		ug/m3		83	68 - 128
Chloroethane	53	54.0		ug/m3		102	70 - 131
Chloroform	98	92.5		ug/m3		95	69 - 129
Chloromethane	41	40.3		ug/m3		98	67 - 127
1,2-Dibromoethane (EDB)	150	128		ug/m3		83	68 - 131
1,2-Dichlorobenzene	120	97.8		ug/m3		81	73 - 143
1,3-Dichlorobenzene	120	98.0		ug/m3		81	77 - 136
1,4-Dichlorobenzene	120	98.6		ug/m3		82	73 - 143
Dichlorodifluoromethane	99	88.0		ug/m3		89	69 - 129
1,1-Dichloroethane	81	79.8		ug/m3		99	65 - 125
1,2-Dichloroethane	81	75.2		ug/m3		93	71 - 131
1,1-Dichloroethene	79	77.4		ug/m3		98	53 - 128
cis-1,2-Dichloroethene	79	76.4		ug/m3		96	68 - 128
trans-1,2-Dichloroethene	79	77.8		ug/m3		98	70 - 130
1,2-Dichloropropane	92	87.0		ug/m3		94	74 - 128
cis-1,3-Dichloropropene	91	89.3		ug/m3		98	78 - 132
trans-1,3-Dichloropropene	91	76.1		ug/m3		84	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	129		ug/m3		92	64 - 124
Ethylbenzene	87	69.9		ug/m3		81	76 - 136
4-Ethyltoluene	98	80.3		ug/m3		82	62 - 136
Hexachlorobutadiene	210	184		ug/m3		86	42 - 150
2-Hexanone	82	74.5		ug/m3		91	70 - 128
Methylene Chloride	69	65.2		ug/m3		94	65 - 125
4-Methyl-2-pentanone (MIBK)	82	84.5		ug/m3		103	73 - 133
Styrene	85	70.5		ug/m3		83	76 - 144
1,1,2,2-Tetrachloroethane	140	118		ug/m3		86	75 - 135
Tetrachloroethene	140	113		ug/m3		83	56 - 138
Toluene	75	70.8		ug/m3		94	71 - 132
1,2,4-Trichlorobenzene	150	135		ug/m3		91	59 - 150
1,1,1-Trichloroethane	110	100		ug/m3		92	65 - 124

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-185826/3
Matrix: Air
Analysis Batch: 185826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	110	91.6		ug/m3		84	71 - 131
Trichloroethene	110	102		ug/m3		95	64 - 127
Trichlorofluoromethane	110	99.8		ug/m3		89	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	150	154		ug/m3		101	50 - 132
1,2,4-Trimethylbenzene	98	81.8		ug/m3		83	61 - 145
1,3,5-Trimethylbenzene	98	80.5		ug/m3		82	65 - 136
Vinyl acetate	70	78.0		ug/m3		111	77 - 134
Vinyl chloride	51	48.9		ug/m3		96	69 - 129
m,p-Xylene	170	137		ug/m3		79	75 - 138
o-Xylene	87	68.9		ug/m3		79	77 - 132
Naphthalene	100	104		ug/m3		99	58 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
Toluene-d8 (Surr)	112		70 - 130

Lab Sample ID: LCSD 320-185826/4
Matrix: Air
Analysis Batch: 185826

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	20.0	19.8		ppb v/v		99	71 - 131	3	25
Benzene	20.0	19.7		ppb v/v		99	68 - 128	2	25
Benzyl chloride	16.0	14.1		ppb v/v		88	58 - 120	2	25
Bromodichloromethane	20.0	19.0		ppb v/v		95	65 - 130	0	25
Bromoform	20.0	16.8		ppb v/v		84	64 - 144	4	25
Bromomethane	20.0	19.5		ppb v/v		98	70 - 131	3	25
2-Butanone (MEK)	20.0	20.6		ppb v/v		103	71 - 131	2	25
Carbon disulfide	20.0	20.3		ppb v/v		102	63 - 123	3	25
Carbon tetrachloride	20.0	18.3		ppb v/v		91	67 - 127	0	25
Chlorobenzene	20.0	16.7		ppb v/v		84	70 - 132	3	25
Dibromochloromethane	20.0	17.0		ppb v/v		85	68 - 128	3	25
Chloroethane	20.0	21.1		ppb v/v		105	70 - 131	3	25
Chloroform	20.0	19.4		ppb v/v		97	69 - 129	2	25
Chloromethane	20.0	20.0		ppb v/v		100	67 - 127	2	25
1,2-Dibromoethane (EDB)	20.0	17.1		ppb v/v		85	68 - 131	3	25
1,2-Dichlorobenzene	20.0	16.7		ppb v/v		84	73 - 143	3	25
1,3-Dichlorobenzene	20.0	16.8		ppb v/v		84	77 - 136	3	25
1,4-Dichlorobenzene	20.0	16.9		ppb v/v		85	73 - 143	3	25
Dichlorodifluoromethane	20.0	18.1		ppb v/v		91	69 - 129	2	25
1,1-Dichloroethane	20.0	20.2		ppb v/v		101	65 - 125	2	25
1,2-Dichloroethane	20.0	18.7		ppb v/v		94	71 - 131	1	25
1,1-Dichloroethene	20.0	20.0		ppb v/v		100	53 - 128	2	25
cis-1,2-Dichloroethene	20.0	19.7		ppb v/v		99	68 - 128	2	25
trans-1,2-Dichloroethene	20.0	20.1		ppb v/v		101	70 - 130	2	25
1,2-Dichloropropane	20.0	19.1		ppb v/v		95	74 - 128	1	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-185826/4
Matrix: Air
Analysis Batch: 185826

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,3-Dichloropropene	20.0	19.9		ppb v/v		100	78 - 132	1	25
trans-1,3-Dichloropropene	20.0	17.1		ppb v/v		86	56 - 136	2	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	19.3		ppb v/v		96	64 - 124	4	25
Ethylbenzene	20.0	16.7		ppb v/v		84	76 - 136	4	25
4-Ethyltoluene	20.0	16.6		ppb v/v		83	62 - 136	2	25
Hexachlorobutadiene	20.0	17.6		ppb v/v		88	42 - 150	2	25
2-Hexanone	20.0	18.8		ppb v/v		94	70 - 128	4	25
Methylene Chloride	20.0	19.3		ppb v/v		96	65 - 125	3	25
4-Methyl-2-pentanone (MIBK)	20.0	20.8		ppb v/v		104	73 - 133	1	25
Styrene	20.0	17.3		ppb v/v		86	76 - 144	4	25
1,1,2,2-Tetrachloroethane	20.0	17.8		ppb v/v		89	75 - 135	3	25
Tetrachloroethene	20.0	17.1		ppb v/v		85	56 - 138	3	25
Toluene	20.0	18.9		ppb v/v		95	71 - 132	1	25
1,2,4-Trichlorobenzene	20.0	19.1		ppb v/v		96	59 - 150	5	25
1,1,1-Trichloroethane	20.0	18.8		ppb v/v		94	65 - 124	2	25
1,1,2-Trichloroethane	20.0	17.3		ppb v/v		87	71 - 131	3	25
Trichloroethene	20.0	19.1		ppb v/v		95	64 - 127	0	25
Trichlorofluoromethane	20.0	18.3		ppb v/v		92	68 - 128	3	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20.7		ppb v/v		103	50 - 132	3	25
1,2,4-Trimethylbenzene	20.0	15.1		ppb v/v		76	61 - 145	9	25
1,3,5-Trimethylbenzene	20.0	16.9		ppb v/v		84	65 - 136	3	25
Vinyl acetate	20.0	22.7		ppb v/v		113	77 - 134	2	25
Vinyl chloride	20.0	20.0		ppb v/v		100	69 - 129	5	25
m,p-Xylene	40.0	32.7		ppb v/v		82	75 - 138	4	25
o-Xylene	20.0	16.5		ppb v/v		82	77 - 132	4	25
Naphthalene	20.0	20.7		ppb v/v		104	58 - 150	4	25

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	48	46.9		ug/m3		99	71 - 131	3	25
Benzene	64	63.0		ug/m3		99	68 - 128	2	25
Benzyl chloride	83	72.9		ug/m3		88	58 - 120	2	25
Bromodichloromethane	130	127		ug/m3		95	65 - 130	0	25
Bromoform	210	174		ug/m3		84	64 - 144	4	25
Bromomethane	78	75.9		ug/m3		98	70 - 131	3	25
2-Butanone (MEK)	59	60.8		ug/m3		103	71 - 131	2	25
Carbon disulfide	62	63.3		ug/m3		102	63 - 123	3	25
Carbon tetrachloride	130	115		ug/m3		91	67 - 127	0	25
Chlorobenzene	92	77.1		ug/m3		84	70 - 132	3	25
Dibromochloromethane	170	145		ug/m3		85	68 - 128	3	25
Chloroethane	53	55.6		ug/m3		105	70 - 131	3	25
Chloroform	98	94.7		ug/m3		97	69 - 129	2	25
Chloromethane	41	41.2		ug/m3		100	67 - 127	2	25
1,2-Dibromoethane (EDB)	150	131		ug/m3		85	68 - 131	3	25
1,2-Dichlorobenzene	120	101		ug/m3		84	73 - 143	3	25
1,3-Dichlorobenzene	120	101		ug/m3		84	77 - 136	3	25
1,4-Dichlorobenzene	120	102		ug/m3		85	73 - 143	3	25
Dichlorodifluoromethane	99	89.6		ug/m3		91	69 - 129	2	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-185826/4

Matrix: Air

Analysis Batch: 185826

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane	81	81.8		ug/m3		101	65 - 125	2	25
1,2-Dichloroethane	81	75.9		ug/m3		94	71 - 131	1	25
1,1-Dichloroethene	79	79.1		ug/m3		100	53 - 128	2	25
cis-1,2-Dichloroethene	79	78.2		ug/m3		99	68 - 128	2	25
trans-1,2-Dichloroethene	79	79.7		ug/m3		101	70 - 130	2	25
1,2-Dichloropropane	92	88.1		ug/m3		95	74 - 128	1	25
cis-1,3-Dichloropropene	91	90.4		ug/m3		100	78 - 132	1	25
trans-1,3-Dichloropropene	91	77.7		ug/m3		86	56 - 136	2	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	135		ug/m3		96	64 - 124	4	25
Ethylbenzene	87	72.6		ug/m3		84	76 - 136	4	25
4-Ethyltoluene	98	81.7		ug/m3		83	62 - 136	2	25
Hexachlorobutadiene	210	188		ug/m3		88	42 - 150	2	25
2-Hexanone	82	77.1		ug/m3		94	70 - 128	4	25
Methylene Chloride	69	67.0		ug/m3		96	65 - 125	3	25
4-Methyl-2-pentanone (MIBK)	82	85.0		ug/m3		104	73 - 133	1	25
Styrene	85	73.7		ug/m3		86	76 - 144	4	25
1,1,2,2-Tetrachloroethane	140	122		ug/m3		89	75 - 135	3	25
Tetrachloroethene	140	116		ug/m3		85	56 - 138	3	25
Toluene	75	71.4		ug/m3		95	71 - 132	1	25
1,2,4-Trichlorobenzene	150	142		ug/m3		96	59 - 150	5	25
1,1,1-Trichloroethane	110	103		ug/m3		94	65 - 124	2	25
1,1,2-Trichloroethane	110	94.6		ug/m3		87	71 - 131	3	25
Trichloroethene	110	102		ug/m3		95	64 - 127	0	25
Trichlorofluoromethane	110	103		ug/m3		92	68 - 128	3	25
1,1,2-Trichloro-1,2,2-trifluoroethane	150	158		ug/m3		103	50 - 132	3	25
1,2,4-Trimethylbenzene	98	74.4		ug/m3		76	61 - 145	9	25
1,3,5-Trimethylbenzene	98	82.9		ug/m3		84	65 - 136	3	25
Vinyl acetate	70	79.9		ug/m3		113	77 - 134	2	25
Vinyl chloride	51	51.2		ug/m3		100	69 - 129	5	25
m,p-Xylene	170	142		ug/m3		82	75 - 138	4	25
o-Xylene	87	71.5		ug/m3		82	77 - 132	4	25
Naphthalene	100	109		ug/m3		104	58 - 150	4	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
Toluene-d8 (Surr)	112		70 - 130

Lab Sample ID: MB 320-186106/6

Matrix: Air

Analysis Batch: 186106

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	ppb v/v			09/25/17 16:53	1
Benzene	ND		0.40	ppb v/v			09/25/17 16:53	1
Benzyl chloride	ND		0.80	ppb v/v			09/25/17 16:53	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-186106/6

Matrix: Air

Analysis Batch: 186106

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		0.30	ppb v/v			09/25/17 16:53	1
Bromoform	ND		0.40	ppb v/v			09/25/17 16:53	1
Bromomethane	ND		0.80	ppb v/v			09/25/17 16:53	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/25/17 16:53	1
Carbon disulfide	ND		0.80	ppb v/v			09/25/17 16:53	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/25/17 16:53	1
Chlorobenzene	ND		0.30	ppb v/v			09/25/17 16:53	1
Dibromochloromethane	ND		0.40	ppb v/v			09/25/17 16:53	1
Chloroethane	ND		0.80	ppb v/v			09/25/17 16:53	1
Chloroform	ND		0.30	ppb v/v			09/25/17 16:53	1
Chloromethane	ND		0.80	ppb v/v			09/25/17 16:53	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/25/17 16:53	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/25/17 16:53	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/25/17 16:53	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/25/17 16:53	1
Dichlorodifluoromethane	ND		0.40	ppb v/v			09/25/17 16:53	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/25/17 16:53	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/25/17 16:53	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/25/17 16:53	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/25/17 16:53	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/25/17 16:53	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/25/17 16:53	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/25/17 16:53	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/25/17 16:53	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/25/17 16:53	1
Ethylbenzene	ND		0.40	ppb v/v			09/25/17 16:53	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/25/17 16:53	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/25/17 16:53	1
2-Hexanone	ND		0.40	ppb v/v			09/25/17 16:53	1
Methylene Chloride	ND		0.40	ppb v/v			09/25/17 16:53	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/25/17 16:53	1
Styrene	ND		0.40	ppb v/v			09/25/17 16:53	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/25/17 16:53	1
Tetrachloroethene	ND		0.40	ppb v/v			09/25/17 16:53	1
Toluene	ND		0.40	ppb v/v			09/25/17 16:53	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/25/17 16:53	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/25/17 16:53	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/25/17 16:53	1
Trichloroethene	ND		0.40	ppb v/v			09/25/17 16:53	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/25/17 16:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/25/17 16:53	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/25/17 16:53	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/25/17 16:53	1
Vinyl acetate	ND		0.80	ppb v/v			09/25/17 16:53	1
Vinyl chloride	ND		0.40	ppb v/v			09/25/17 16:53	1
m,p-Xylene	ND		0.80	ppb v/v			09/25/17 16:53	1
o-Xylene	ND		0.40	ppb v/v			09/25/17 16:53	1
Naphthalene	ND		0.80	ppb v/v			09/25/17 16:53	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		12	ug/m3			09/25/17 16:53	1
Benzene	ND		1.3	ug/m3			09/25/17 16:53	1
Benzyl chloride	ND		4.1	ug/m3			09/25/17 16:53	1
Bromodichloromethane	ND		2.0	ug/m3			09/25/17 16:53	1
Bromoform	ND		4.1	ug/m3			09/25/17 16:53	1
Bromomethane	ND		3.1	ug/m3			09/25/17 16:53	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/25/17 16:53	1
Carbon disulfide	ND		2.5	ug/m3			09/25/17 16:53	1
Carbon tetrachloride	ND		5.0	ug/m3			09/25/17 16:53	1
Chlorobenzene	ND		1.4	ug/m3			09/25/17 16:53	1
Dibromochloromethane	ND		3.4	ug/m3			09/25/17 16:53	1
Chloroethane	ND		2.1	ug/m3			09/25/17 16:53	1
Chloroform	ND		1.5	ug/m3			09/25/17 16:53	1
Chloromethane	ND		1.7	ug/m3			09/25/17 16:53	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/25/17 16:53	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/25/17 16:53	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/25/17 16:53	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/25/17 16:53	1
Dichlorodifluoromethane	ND		2.0	ug/m3			09/25/17 16:53	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/25/17 16:53	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/25/17 16:53	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/25/17 16:53	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/25/17 16:53	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/25/17 16:53	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/25/17 16:53	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/25/17 16:53	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/25/17 16:53	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/25/17 16:53	1
Ethylbenzene	ND		1.7	ug/m3			09/25/17 16:53	1
4-Ethyltoluene	ND		2.0	ug/m3			09/25/17 16:53	1
Hexachlorobutadiene	ND		21	ug/m3			09/25/17 16:53	1
2-Hexanone	ND		1.6	ug/m3			09/25/17 16:53	1
Methylene Chloride	ND		1.4	ug/m3			09/25/17 16:53	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/25/17 16:53	1
Styrene	ND		1.7	ug/m3			09/25/17 16:53	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/25/17 16:53	1
Tetrachloroethene	ND		2.7	ug/m3			09/25/17 16:53	1
Toluene	ND		1.5	ug/m3			09/25/17 16:53	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/25/17 16:53	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/25/17 16:53	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/25/17 16:53	1
Trichloroethene	ND		2.1	ug/m3			09/25/17 16:53	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/25/17 16:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/25/17 16:53	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/25/17 16:53	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/25/17 16:53	1
Vinyl acetate	ND		2.8	ug/m3			09/25/17 16:53	1
Vinyl chloride	ND		1.0	ug/m3			09/25/17 16:53	1
m,p-Xylene	ND		3.5	ug/m3			09/25/17 16:53	1
o-Xylene	ND		1.7	ug/m3			09/25/17 16:53	1
Naphthalene	ND		4.2	ug/m3			09/25/17 16:53	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-186106/6
Matrix: Air
Analysis Batch: 186106

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	107		70 - 130		09/25/17 16:53	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		09/25/17 16:53	1
Toluene-d8 (Surr)	123		70 - 130		09/25/17 16:53	1

Lab Sample ID: LCS 320-186106/3
Matrix: Air
Analysis Batch: 186106

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Acetone	20.0	20.9		ppb v/v		105	71 - 131
Benzene	20.0	19.9		ppb v/v		99	68 - 128
Benzyl chloride	16.0	13.8		ppb v/v		86	58 - 120
Bromodichloromethane	20.0	19.7		ppb v/v		98	65 - 130
Bromoform	20.0	16.4		ppb v/v		82	64 - 144
Bromomethane	20.0	20.2		ppb v/v		101	70 - 131
2-Butanone (MEK)	20.0	21.2		ppb v/v		106	71 - 131
Carbon disulfide	20.0	21.0		ppb v/v		105	63 - 123
Carbon tetrachloride	20.0	18.9		ppb v/v		94	67 - 127
Chlorobenzene	20.0	16.2		ppb v/v		81	70 - 132
Dibromochloromethane	20.0	16.6		ppb v/v		83	68 - 128
Chloroethane	20.0	21.5		ppb v/v		107	70 - 131
Chloroform	20.0	20.2		ppb v/v		101	69 - 129
Chloromethane	20.0	20.9		ppb v/v		105	67 - 127
1,2-Dibromoethane (EDB)	20.0	16.6		ppb v/v		83	68 - 131
1,2-Dichlorobenzene	20.0	16.3		ppb v/v		82	73 - 143
1,3-Dichlorobenzene	20.0	16.3		ppb v/v		81	77 - 136
1,4-Dichlorobenzene	20.0	16.4		ppb v/v		82	73 - 143
Dichlorodifluoromethane	20.0	18.9		ppb v/v		95	69 - 129
1,1-Dichloroethane	20.0	21.0		ppb v/v		105	65 - 125
1,2-Dichloroethane	20.0	19.3		ppb v/v		96	71 - 131
1,1-Dichloroethene	20.0	20.7		ppb v/v		104	53 - 128
cis-1,2-Dichloroethene	20.0	20.5		ppb v/v		102	68 - 128
trans-1,2-Dichloroethene	20.0	20.9		ppb v/v		104	70 - 130
1,2-Dichloropropane	20.0	19.7		ppb v/v		98	74 - 128
cis-1,3-Dichloropropene	20.0	20.2		ppb v/v		101	78 - 132
trans-1,3-Dichloropropene	20.0	16.6		ppb v/v		83	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	20.0		ppb v/v		100	64 - 124
Ethylbenzene	20.0	16.2		ppb v/v		81	76 - 136
4-Ethyltoluene	20.0	16.2		ppb v/v		81	62 - 136
Hexachlorobutadiene	20.0	17.1		ppb v/v		85	42 - 150
2-Hexanone	20.0	18.1		ppb v/v		91	70 - 128
Methylene Chloride	20.0	20.0		ppb v/v		100	65 - 125
4-Methyl-2-pentanone (MIBK)	20.0	21.3		ppb v/v		106	73 - 133
Styrene	20.0	16.7		ppb v/v		83	76 - 144
1,1,2,2-Tetrachloroethane	20.0	17.3		ppb v/v		86	75 - 135
Tetrachloroethene	20.0	16.6		ppb v/v		83	56 - 138
Toluene	20.0	19.3		ppb v/v		96	71 - 132

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-186106/3

Matrix: Air

Analysis Batch: 186106

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	20.0	18.4		ppb v/v		92	59 - 150
1,1,1-Trichloroethane	20.0	19.7		ppb v/v		98	65 - 124
1,1,2-Trichloroethane	20.0	16.7		ppb v/v		83	71 - 131
Trichloroethene	20.0	19.7		ppb v/v		98	64 - 127
Trichlorofluoromethane	20.0	19.1		ppb v/v		95	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	21.5		ppb v/v		108	50 - 132
1,2,4-Trimethylbenzene	20.0	14.9		ppb v/v		74	61 - 145
1,3,5-Trimethylbenzene	20.0	16.5		ppb v/v		83	65 - 136
Vinyl acetate	20.0	23.5		ppb v/v		118	77 - 134
Vinyl chloride	20.0	20.7		ppb v/v		104	69 - 129
m,p-Xylene	40.0	31.5		ppb v/v		79	75 - 138
o-Xylene	20.0	16.1		ppb v/v		80	77 - 132
Naphthalene	20.0	20.1		ppb v/v		101	58 - 150
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	48	49.7		ug/m3		105	71 - 131
Benzene	64	63.5		ug/m3		99	68 - 128
Benzyl chloride	83	71.5		ug/m3		86	58 - 120
Bromodichloromethane	130	132		ug/m3		98	65 - 130
Bromoform	210	169		ug/m3		82	64 - 144
Bromomethane	78	78.6		ug/m3		101	70 - 131
2-Butanone (MEK)	59	62.6		ug/m3		106	71 - 131
Carbon disulfide	62	65.5		ug/m3		105	63 - 123
Carbon tetrachloride	130	119		ug/m3		94	67 - 127
Chlorobenzene	92	74.4		ug/m3		81	70 - 132
Dibromochloromethane	170	142		ug/m3		83	68 - 128
Chloroethane	53	56.7		ug/m3		107	70 - 131
Chloroform	98	98.9		ug/m3		101	69 - 129
Chloromethane	41	43.2		ug/m3		105	67 - 127
1,2-Dibromoethane (EDB)	150	127		ug/m3		83	68 - 131
1,2-Dichlorobenzene	120	98.1		ug/m3		82	73 - 143
1,3-Dichlorobenzene	120	98.0		ug/m3		81	77 - 136
1,4-Dichlorobenzene	120	98.9		ug/m3		82	73 - 143
Dichlorodifluoromethane	99	93.5		ug/m3		95	69 - 129
1,1-Dichloroethane	81	85.0		ug/m3		105	65 - 125
1,2-Dichloroethane	81	78.1		ug/m3		96	71 - 131
1,1-Dichloroethene	79	82.1		ug/m3		104	53 - 128
cis-1,2-Dichloroethene	79	81.1		ug/m3		102	68 - 128
trans-1,2-Dichloroethene	79	82.8		ug/m3		104	70 - 130
1,2-Dichloropropane	92	91.0		ug/m3		98	74 - 128
cis-1,3-Dichloropropene	91	91.8		ug/m3		101	78 - 132
trans-1,3-Dichloropropene	91	75.5		ug/m3		83	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	140		ug/m3		100	64 - 124
Ethylbenzene	87	70.3		ug/m3		81	76 - 136
4-Ethyltoluene	98	79.7		ug/m3		81	62 - 136
Hexachlorobutadiene	210	182		ug/m3		85	42 - 150
2-Hexanone	82	74.4		ug/m3		91	70 - 128

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-186106/3

Matrix: Air

Analysis Batch: 186106

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	69	69.6		ug/m3		100	65 - 125
4-Methyl-2-pentanone (MIBK)	82	87.1		ug/m3		106	73 - 133
Styrene	85	71.1		ug/m3		83	76 - 144
1,1,2,2-Tetrachloroethane	140	119		ug/m3		86	75 - 135
Tetrachloroethene	140	112		ug/m3		83	56 - 138
Toluene	75	72.6		ug/m3		96	71 - 132
1,2,4-Trichlorobenzene	150	136		ug/m3		92	59 - 150
1,1,1-Trichloroethane	110	107		ug/m3		98	65 - 124
1,1,2-Trichloroethane	110	91.0		ug/m3		83	71 - 131
Trichloroethene	110	106		ug/m3		98	64 - 127
Trichlorofluoromethane	110	107		ug/m3		95	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	150	165		ug/m3		108	50 - 132
1,2,4-Trimethylbenzene	98	73.2		ug/m3		74	61 - 145
1,3,5-Trimethylbenzene	98	81.2		ug/m3		83	65 - 136
Vinyl acetate	70	82.8		ug/m3		118	77 - 134
Vinyl chloride	51	53.0		ug/m3		104	69 - 129
m,p-Xylene	170	137		ug/m3		79	75 - 138
o-Xylene	87	69.7		ug/m3		80	77 - 132
Naphthalene	100	106		ug/m3		101	58 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,2-Dichloroethane-d4 (Surr)	104		70 - 130
Toluene-d8 (Surr)	116		70 - 130

Lab Sample ID: LCSD 320-186106/4

Matrix: Air

Analysis Batch: 186106

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	20.0	20.2		ppb v/v		101	71 - 131	3	25
Benzene	20.0	19.9		ppb v/v		100	68 - 128	0	25
Benzyl chloride	16.0	13.7		ppb v/v		85	58 - 120	1	25
Bromodichloromethane	20.0	19.4		ppb v/v		97	65 - 130	1	25
Bromoform	20.0	16.1		ppb v/v		80	64 - 144	2	25
Bromomethane	20.0	19.9		ppb v/v		99	70 - 131	2	25
2-Butanone (MEK)	20.0	21.0		ppb v/v		105	71 - 131	1	25
Carbon disulfide	20.0	20.8		ppb v/v		104	63 - 123	1	25
Carbon tetrachloride	20.0	18.7		ppb v/v		93	67 - 127	1	25
Chlorobenzene	20.0	16.1		ppb v/v		81	70 - 132	0	25
Dibromochloromethane	20.0	16.4		ppb v/v		82	68 - 128	1	25
Chloroethane	20.0	21.3		ppb v/v		106	70 - 131	1	25
Chloroform	20.0	20.0		ppb v/v		100	69 - 129	1	25
Chloromethane	20.0	20.6		ppb v/v		103	67 - 127	2	25
1,2-Dibromoethane (EDB)	20.0	16.5		ppb v/v		82	68 - 131	0	25
1,2-Dichlorobenzene	20.0	16.3		ppb v/v		81	73 - 143	0	25
1,3-Dichlorobenzene	20.0	16.2		ppb v/v		81	77 - 136	1	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-186106/4

Client Sample ID: Lab Control Sample Dup

Matrix: Air

Prep Type: Total/NA

Analysis Batch: 186106

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	20.0	16.4		ppb v/v		82	73 - 143	1	25
Dichlorodifluoromethane	20.0	18.4		ppb v/v		92	69 - 129	3	25
1,1-Dichloroethane	20.0	20.7		ppb v/v		103	65 - 125	2	25
1,2-Dichloroethane	20.0	19.0		ppb v/v		95	71 - 131	2	25
1,1-Dichloroethene	20.0	20.3		ppb v/v		102	53 - 128	2	25
cis-1,2-Dichloroethene	20.0	20.5		ppb v/v		102	68 - 128	0	25
trans-1,2-Dichloroethene	20.0	20.5		ppb v/v		102	70 - 130	2	25
1,2-Dichloropropane	20.0	19.3		ppb v/v		97	74 - 128	2	25
cis-1,3-Dichloropropene	20.0	20.0		ppb v/v		100	78 - 132	1	25
trans-1,3-Dichloropropene	20.0	16.5		ppb v/v		82	56 - 136	1	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	19.7		ppb v/v		98	64 - 124	2	25
Ethylbenzene	20.0	16.1		ppb v/v		81	76 - 136	0	25
4-Ethyltoluene	20.0	15.5		ppb v/v		78	62 - 136	4	25
Hexachlorobutadiene	20.0	16.9		ppb v/v		84	42 - 150	1	25
2-Hexanone	20.0	17.9		ppb v/v		90	70 - 128	1	25
Methylene Chloride	20.0	19.7		ppb v/v		98	65 - 125	2	25
4-Methyl-2-pentanone (MIBK)	20.0	21.2		ppb v/v		106	73 - 133	0	25
Styrene	20.0	16.6		ppb v/v		83	76 - 144	0	25
1,1,1,2-Tetrachloroethane	20.0	17.0		ppb v/v		85	75 - 135	2	25
Tetrachloroethene	20.0	16.6		ppb v/v		83	56 - 138	0	25
Toluene	20.0	19.2		ppb v/v		96	71 - 132	0	25
1,2,4-Trichlorobenzene	20.0	18.7		ppb v/v		94	59 - 150	2	25
1,1,1-Trichloroethane	20.0	19.2		ppb v/v		96	65 - 124	3	25
1,1,2-Trichloroethane	20.0	16.6		ppb v/v		83	71 - 131	0	25
Trichloroethene	20.0	19.5		ppb v/v		98	64 - 127	1	25
Trichlorofluoromethane	20.0	18.7		ppb v/v		94	68 - 128	2	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	21.1		ppb v/v		106	50 - 132	2	25
1,2,4-Trimethylbenzene	20.0	16.5		ppb v/v		83	61 - 145	10	25
1,3,5-Trimethylbenzene	20.0	16.1		ppb v/v		81	65 - 136	2	25
Vinyl acetate	20.0	23.2		ppb v/v		116	77 - 134	1	25
Vinyl chloride	20.0	20.5		ppb v/v		102	69 - 129	1	25
m,p-Xylene	40.0	31.4		ppb v/v		78	75 - 138	1	25
o-Xylene	20.0	15.9		ppb v/v		80	77 - 132	1	25
Naphthalene	20.0	19.9		ppb v/v		100	58 - 150	1	25

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	48	48.0		ug/m3		101	71 - 131	3	25
Benzene	64	63.6		ug/m3		100	68 - 128	0	25
Benzyl chloride	83	70.7		ug/m3		85	58 - 120	1	25
Bromodichloromethane	130	130		ug/m3		97	65 - 130	1	25
Bromoform	210	166		ug/m3		80	64 - 144	2	25
Bromomethane	78	77.1		ug/m3		99	70 - 131	2	25
2-Butanone (MEK)	59	62.0		ug/m3		105	71 - 131	1	25
Carbon disulfide	62	64.9		ug/m3		104	63 - 123	1	25
Carbon tetrachloride	130	117		ug/m3		93	67 - 127	1	25
Chlorobenzene	92	74.2		ug/m3		81	70 - 132	0	25
Dibromochloromethane	170	140		ug/m3		82	68 - 128	1	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-186106/4
Matrix: Air
Analysis Batch: 186106

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloroethane	53	56.2		ug/m3		106	70 - 131	1	25
Chloroform	98	97.6		ug/m3		100	69 - 129	1	25
Chloromethane	41	42.6		ug/m3		103	67 - 127	2	25
1,2-Dibromoethane (EDB)	150	127		ug/m3		82	68 - 131	0	25
1,2-Dichlorobenzene	120	97.7		ug/m3		81	73 - 143	0	25
1,3-Dichlorobenzene	120	97.2		ug/m3		81	77 - 136	1	25
1,4-Dichlorobenzene	120	98.4		ug/m3		82	73 - 143	1	25
Dichlorodifluoromethane	99	91.0		ug/m3		92	69 - 129	3	25
1,1-Dichloroethane	81	83.6		ug/m3		103	65 - 125	2	25
1,2-Dichloroethane	81	76.8		ug/m3		95	71 - 131	2	25
1,1-Dichloroethene	79	80.6		ug/m3		102	53 - 128	2	25
cis-1,2-Dichloroethene	79	81.1		ug/m3		102	68 - 128	0	25
trans-1,2-Dichloroethene	79	81.2		ug/m3		102	70 - 130	2	25
1,2-Dichloropropane	92	89.3		ug/m3		97	74 - 128	2	25
cis-1,3-Dichloropropene	91	90.7		ug/m3		100	78 - 132	1	25
trans-1,3-Dichloropropene	91	74.7		ug/m3		82	56 - 136	1	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	138		ug/m3		98	64 - 124	2	25
Ethylbenzene	87	70.1		ug/m3		81	76 - 136	0	25
4-Ethyltoluene	98	76.3		ug/m3		78	62 - 136	4	25
Hexachlorobutadiene	210	180		ug/m3		84	42 - 150	1	25
2-Hexanone	82	73.5		ug/m3		90	70 - 128	1	25
Methylene Chloride	69	68.4		ug/m3		98	65 - 125	2	25
4-Methyl-2-pentanone (MIBK)	82	86.9		ug/m3		106	73 - 133	0	25
Styrene	85	70.9		ug/m3		83	76 - 144	0	25
1,1,2,2-Tetrachloroethane	140	117		ug/m3		85	75 - 135	2	25
Tetrachloroethene	140	112		ug/m3		83	56 - 138	0	25
Toluene	75	72.4		ug/m3		96	71 - 132	0	25
1,2,4-Trichlorobenzene	150	139		ug/m3		94	59 - 150	2	25
1,1,1-Trichloroethane	110	105		ug/m3		96	65 - 124	3	25
1,1,2-Trichloroethane	110	90.8		ug/m3		83	71 - 131	0	25
Trichloroethene	110	105		ug/m3		98	64 - 127	1	25
Trichlorofluoromethane	110	105		ug/m3		94	68 - 128	2	25
1,1,2-Trichloro-1,2,2-trifluoroethane	150	162		ug/m3		106	50 - 132	2	25
1,2,4-Trimethylbenzene	98	81.1		ug/m3		83	61 - 145	10	25
1,3,5-Trimethylbenzene	98	79.2		ug/m3		81	65 - 136	2	25
Vinyl acetate	70	81.8		ug/m3		116	77 - 134	1	25
Vinyl chloride	51	52.4		ug/m3		102	69 - 129	1	25
m,p-Xylene	170	136		ug/m3		78	75 - 138	1	25
o-Xylene	87	69.1		ug/m3		80	77 - 132	1	25
Naphthalene	100	104		ug/m3		100	58 - 150	1	25

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
Toluene-d8 (Surr)	116		70 - 130

TestAmerica Sacramento

QC Association Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Air - GC/MS VOA

Analysis Batch: 185612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-31467-11	G-170907-RA-12	Total/NA	Air	TO-15	
320-31467-12	G-170907-RA-13	Total/NA	Air	TO-15	
320-31467-13	G-170907-RA-14	Total/NA	Air	TO-15	
320-31467-14	G-170907-RA-15	Total/NA	Air	TO-15	
320-31467-15	G-170907-RA-16	Total/NA	Air	TO-15	
320-31467-16	G-170907-RA-17	Total/NA	Air	TO-15	
320-31467-17	G-170907-RA-18	Total/NA	Air	TO-15	
320-31467-18	G-170907-RA-19	Total/NA	Air	TO-15	
320-31467-19	G-170907-RA-20	Total/NA	Air	TO-15	
MB 320-185612/11	Method Blank	Total/NA	Air	TO-15	
LCS 320-185612/26	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 320-185612/27	Lab Control Sample Dup	Total/NA	Air	TO-15	

Analysis Batch: 185620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-31467-2	SS-170906-RA-02	Total/NA	Air	TO-15	
320-31467-3	SS-170906-RA-03	Total/NA	Air	TO-15	
320-31467-4	SS-170906-RA-04	Total/NA	Air	TO-15	
320-31467-5	SS-170906-RA-05	Total/NA	Air	TO-15	
320-31467-6	SS-170906-RA-06	Total/NA	Air	TO-15	
320-31467-7	SS-170906-RA-07	Total/NA	Air	TO-15	
320-31467-8	SS-170906-RA-08	Total/NA	Air	TO-15	
320-31467-9	SS-170906-RA-09	Total/NA	Air	TO-15	
320-31467-10	G-170907-RA-11	Total/NA	Air	TO-15	
MB 320-185620/6	Method Blank	Total/NA	Air	TO-15	
LCS 320-185620/3	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 320-185620/4	Lab Control Sample Dup	Total/NA	Air	TO-15	

Analysis Batch: 185823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-31467-20	G-170906-RA-01	Total/NA	Air	TO-15	
320-31467-22	G-170906-RA-03	Total/NA	Air	TO-15	
320-31467-23	G-170906-RA-04	Total/NA	Air	TO-15	
320-31467-24	G-170906-RA-05	Total/NA	Air	TO-15	
320-31467-25	G-170906-RA-06	Total/NA	Air	TO-15	
320-31467-26	G-170906-RA-07	Total/NA	Air	TO-15	
320-31467-27	G-170906-RA-08	Total/NA	Air	TO-15	
320-31467-28	G-170907-RA-09	Total/NA	Air	TO-15	
320-31467-29	G-170907-RA-10	Total/NA	Air	TO-15	
320-31467-30	G-170907-RA-21	Total/NA	Air	TO-15	
320-31467-31	G-170907-RA-22	Total/NA	Air	TO-15	
320-31467-32	G-170907-RA-23	Total/NA	Air	TO-15	
MB 320-185823/6	Method Blank	Total/NA	Air	TO-15	
LCS 320-185823/3	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 320-185823/4	Lab Control Sample Dup	Total/NA	Air	TO-15	

Analysis Batch: 185826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-31467-1	SS-170906-RA-01	Total/NA	Air	TO-15	
320-31467-33	G-170907-RA-24	Total/NA	Air	TO-15	
320-31467-34	G-170907-RA-25	Total/NA	Air	TO-15	

TestAmerica Sacramento

QC Association Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Air - GC/MS VOA (Continued)

Analysis Batch: 185826 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-31467-35	G-170907-RA-26	Total/NA	Air	TO-15	
320-31467-36	G-170907-RA-27	Total/NA	Air	TO-15	
320-31467-37	G-170907-RA-28	Total/NA	Air	TO-15	
320-31467-38	G-170907-RA-29	Total/NA	Air	TO-15	
320-31467-39	G-170907-RA-30	Total/NA	Air	TO-15	
320-31467-40	G-170907-RA-31	Total/NA	Air	TO-15	
320-31467-41	G-170907-RA-32	Total/NA	Air	TO-15	
320-31467-42	G-170907-RA-33	Total/NA	Air	TO-15	
MB 320-185826/6	Method Blank	Total/NA	Air	TO-15	
LCS 320-185826/3	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 320-185826/4	Lab Control Sample Dup	Total/NA	Air	TO-15	

Analysis Batch: 186106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-31467-21	G-170906-RA-02	Total/NA	Air	TO-15	
MB 320-186106/6	Method Blank	Total/NA	Air	TO-15	
LCS 320-186106/3	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 320-186106/4	Lab Control Sample Dup	Total/NA	Air	TO-15	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-01

Lab Sample ID: 320-31467-1

Date Collected: 09/06/17 10:59

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	495 mL	250 mL	185826	09/22/17 18:17	AP1	TAL SAC

Client Sample ID: SS-170906-RA-02

Lab Sample ID: 320-31467-2

Date Collected: 09/06/17 11:05

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	464 mL	250 mL	185620	09/21/17 21:08	AP1	TAL SAC

Client Sample ID: SS-170906-RA-03

Lab Sample ID: 320-31467-3

Date Collected: 09/06/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		2.38	200 mL	250 mL	185620	09/21/17 22:01	AP1	TAL SAC

Client Sample ID: SS-170906-RA-04

Lab Sample ID: 320-31467-4

Date Collected: 09/06/17 12:43

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		6.54	75 mL	250 mL	185620	09/21/17 22:54	AP1	TAL SAC

Client Sample ID: SS-170906-RA-05

Lab Sample ID: 320-31467-5

Date Collected: 09/06/17 12:58

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	480 mL	250 mL	185620	09/21/17 23:51	AP1	TAL SAC

Client Sample ID: SS-170906-RA-06

Lab Sample ID: 320-31467-6

Date Collected: 09/06/17 10:59

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	407 mL	250 mL	185620	09/22/17 00:47	AP1	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: SS-170906-RA-07

Lab Sample ID: 320-31467-7

Date Collected: 09/06/17 11:14

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	471 mL	250 mL	185620	09/22/17 01:44	AP1	TAL SAC

Client Sample ID: SS-170906-RA-08

Lab Sample ID: 320-31467-8

Date Collected: 09/06/17 11:18

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	476 mL	250 mL	185620	09/22/17 02:42	AP1	TAL SAC

Client Sample ID: SS-170906-RA-09

Lab Sample ID: 320-31467-9

Date Collected: 09/06/17 12:37

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	500 mL	250 mL	185620	09/22/17 07:58	AP1	TAL SAC

Client Sample ID: G-170907-RA-11

Lab Sample ID: 320-31467-10

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	482 mL	250 mL	185620	09/22/17 08:55	AP1	TAL SAC

Client Sample ID: G-170907-RA-12

Lab Sample ID: 320-31467-11

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	495 mL	250 mL	185612	09/22/17 00:11	AP1	TAL SAC

Client Sample ID: G-170907-RA-13

Lab Sample ID: 320-31467-12

Date Collected: 09/07/17 09:55

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	450 mL	250 mL	185612	09/22/17 01:03	AP1	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-14

Lab Sample ID: 320-31467-13

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	495 mL	250 mL	185612	09/22/17 01:56	AP1	TAL SAC

Client Sample ID: G-170907-RA-15

Lab Sample ID: 320-31467-14

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	700 mL	250 mL	185612	09/22/17 02:53	AP1	TAL SAC

Client Sample ID: G-170907-RA-16

Lab Sample ID: 320-31467-15

Date Collected: 09/07/17 10:33

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	405 mL	250 mL	185612	09/22/17 03:44	AP1	TAL SAC

Client Sample ID: G-170907-RA-17

Lab Sample ID: 320-31467-16

Date Collected: 09/07/17 10:37

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		2.77	750 mL	250 mL	185612	09/22/17 04:41	AP1	TAL SAC

Client Sample ID: G-170907-RA-18

Lab Sample ID: 320-31467-17

Date Collected: 09/07/17 10:37

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	705 mL	250 mL	185612	09/22/17 05:39	AP1	TAL SAC

Client Sample ID: G-170907-RA-19

Lab Sample ID: 320-31467-18

Date Collected: 09/07/17 10:55

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	520 mL	250 mL	185612	09/22/17 06:32	AP1	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-20

Lab Sample ID: 320-31467-19

Date Collected: 09/07/17 10:56

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	520 mL	250 mL	185612	09/22/17 07:25	AP1	TAL SAC

Client Sample ID: G-170906-RA-01

Lab Sample ID: 320-31467-20

Date Collected: 09/06/17 12:43

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	529 mL	250 mL	185823	09/22/17 15:31	AP1	TAL SAC

Client Sample ID: G-170906-RA-02

Lab Sample ID: 320-31467-21

Date Collected: 09/06/17 13:06

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	745 mL	250 mL	186106	09/25/17 18:19	AP1	TAL SAC

Client Sample ID: G-170906-RA-03

Lab Sample ID: 320-31467-22

Date Collected: 09/06/17 13:29

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	520 mL	250 mL	185823	09/22/17 17:18	AP1	TAL SAC

Client Sample ID: G-170906-RA-04

Lab Sample ID: 320-31467-23

Date Collected: 09/06/17 14:34

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	505 mL	250 mL	185823	09/22/17 18:11	AP1	TAL SAC

Client Sample ID: G-170906-RA-05

Lab Sample ID: 320-31467-24

Date Collected: 09/06/17 14:32

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	545 mL	250 mL	185823	09/22/17 19:05	AP1	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170906-RA-06

Lab Sample ID: 320-31467-25

Date Collected: 09/06/17 14:49

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	407 mL	250 mL	185823	09/22/17 19:56	AP1	TAL SAC

Client Sample ID: G-170906-RA-07

Lab Sample ID: 320-31467-26

Date Collected: 09/06/17 15:15

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		5.4	92 mL	250 mL	185823	09/22/17 20:40	AP1	TAL SAC

Client Sample ID: G-170906-RA-08

Lab Sample ID: 320-31467-27

Date Collected: 09/06/17 15:14

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		3.44	137 mL	250 mL	185823	09/22/17 21:26	AP1	TAL SAC

Client Sample ID: G-170907-RA-09

Lab Sample ID: 320-31467-28

Date Collected: 09/07/17 09:48

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1.3	325 mL	250 mL	185823	09/22/17 22:15	AP1	TAL SAC

Client Sample ID: G-170907-RA-10

Lab Sample ID: 320-31467-29

Date Collected: 09/07/17 09:49

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	510 mL	250 mL	185823	09/22/17 23:08	AP1	TAL SAC

Client Sample ID: G-170907-RA-21

Lab Sample ID: 320-31467-30

Date Collected: 09/07/17 10:58

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1.3	375 mL	250 mL	185823	09/22/17 23:58	AP1	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-22

Lab Sample ID: 320-31467-31

Date Collected: 09/07/17 12:26

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	505 mL	250 mL	185823	09/23/17 00:51	AP1	TAL SAC

Client Sample ID: G-170907-RA-23

Lab Sample ID: 320-31467-32

Date Collected: 09/07/17 12:31

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	535 mL	250 mL	185823	09/23/17 01:45	AP1	TAL SAC

Client Sample ID: G-170907-RA-24

Lab Sample ID: 320-31467-33

Date Collected: 09/07/17 12:32

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	518 mL	250 mL	185826	09/22/17 19:16	AP1	TAL SAC

Client Sample ID: G-170907-RA-25

Lab Sample ID: 320-31467-34

Date Collected: 09/07/17 13:24

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	563 mL	250 mL	185826	09/22/17 20:16	AP1	TAL SAC

Client Sample ID: G-170907-RA-26

Lab Sample ID: 320-31467-35

Date Collected: 09/07/17 13:23

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	590 mL	250 mL	185826	09/22/17 21:14	AP1	TAL SAC

Client Sample ID: G-170907-RA-27

Lab Sample ID: 320-31467-36

Date Collected: 09/07/17 13:25

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1.61	349 mL	250 mL	185826	09/22/17 22:11	AP1	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Client Sample ID: G-170907-RA-28

Lab Sample ID: 320-31467-37

Date Collected: 09/07/17 13:24

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		4.28	127 mL	250 mL	185826	09/22/17 23:02	AP1	TAL SAC

Client Sample ID: G-170907-RA-29

Lab Sample ID: 320-31467-38

Date Collected: 09/07/17 13:34

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		2.26	234 mL	250 mL	185826	09/22/17 23:56	AP1	TAL SAC

Client Sample ID: G-170907-RA-30

Lab Sample ID: 320-31467-39

Date Collected: 09/07/17 13:31

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		2.18	246 mL	250 mL	185826	09/23/17 00:50	AP1	TAL SAC

Client Sample ID: G-170907-RA-31

Lab Sample ID: 320-31467-40

Date Collected: 09/07/17 13:32

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	475 mL	250 mL	185826	09/23/17 01:47	AP1	TAL SAC

Client Sample ID: G-170907-RA-32

Lab Sample ID: 320-31467-41

Date Collected: 09/07/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		3.65	128 mL	250 mL	185826	09/23/17 02:39	AP1	TAL SAC

Client Sample ID: G-170907-RA-33

Lab Sample ID: 320-31467-42

Date Collected: 09/07/17 12:36

Matrix: Air

Date Received: 09/12/17 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1	518 mL	250 mL	185826	09/23/17 03:37	AP1	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17 *
Arkansas DEQ	State Program	6	88-0691	06-17-18
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-18
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-18
Georgia	State Program	4	N/A	01-29-18
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	10-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-18
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-18
New Hampshire	NELAP	1	2997	04-18-18
New Jersey	NELAP	2	CA005	06-30-18
New York	NELAP	2	11666	04-01-18
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-18
Texas	NELAP	6	T104704399	05-31-18
US Fish & Wildlife	Federal		LE148388-0	07-31-18
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-18
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-29-17 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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Sample Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31467-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-31467-1	SS-170906-RA-01	Air	09/06/17 10:59	09/12/17 09:30
320-31467-2	SS-170906-RA-02	Air	09/06/17 11:05	09/12/17 09:30
320-31467-3	SS-170906-RA-03	Air	09/06/17 12:36	09/12/17 09:30
320-31467-4	SS-170906-RA-04	Air	09/06/17 12:43	09/12/17 09:30
320-31467-5	SS-170906-RA-05	Air	09/06/17 12:58	09/12/17 09:30
320-31467-6	SS-170906-RA-06	Air	09/06/17 10:59	09/12/17 09:30
320-31467-7	SS-170906-RA-07	Air	09/06/17 11:14	09/12/17 09:30
320-31467-8	SS-170906-RA-08	Air	09/06/17 11:18	09/12/17 09:30
320-31467-9	SS-170906-RA-09	Air	09/06/17 12:37	09/12/17 09:30
320-31467-10	G-170907-RA-11	Air	09/07/17 09:48	09/12/17 09:30
320-31467-11	G-170907-RA-12	Air	09/07/17 09:48	09/12/17 09:30
320-31467-12	G-170907-RA-13	Air	09/07/17 09:55	09/12/17 09:30
320-31467-13	G-170907-RA-14	Air	09/07/17 10:33	09/12/17 09:30
320-31467-14	G-170907-RA-15	Air	09/07/17 10:33	09/12/17 09:30
320-31467-15	G-170907-RA-16	Air	09/07/17 10:33	09/12/17 09:30
320-31467-16	G-170907-RA-17	Air	09/07/17 10:37	09/12/17 09:30
320-31467-17	G-170907-RA-18	Air	09/07/17 10:37	09/12/17 09:30
320-31467-18	G-170907-RA-19	Air	09/07/17 10:55	09/12/17 09:30
320-31467-19	G-170907-RA-20	Air	09/07/17 10:56	09/12/17 09:30
320-31467-20	G-170906-RA-01	Air	09/06/17 12:43	09/12/17 09:30
320-31467-21	G-170906-RA-02	Air	09/06/17 13:06	09/12/17 09:30
320-31467-22	G-170906-RA-03	Air	09/06/17 13:29	09/12/17 09:30
320-31467-23	G-170906-RA-04	Air	09/06/17 14:34	09/12/17 09:30
320-31467-24	G-170906-RA-05	Air	09/06/17 14:32	09/12/17 09:30
320-31467-25	G-170906-RA-06	Air	09/06/17 14:49	09/12/17 09:30
320-31467-26	G-170906-RA-07	Air	09/06/17 15:15	09/12/17 09:30
320-31467-27	G-170906-RA-08	Air	09/06/17 15:14	09/12/17 09:30
320-31467-28	G-170907-RA-09	Air	09/07/17 09:48	09/12/17 09:30
320-31467-29	G-170907-RA-10	Air	09/07/17 09:49	09/12/17 09:30
320-31467-30	G-170907-RA-21	Air	09/07/17 10:58	09/12/17 09:30
320-31467-31	G-170907-RA-22	Air	09/07/17 12:26	09/12/17 09:30
320-31467-32	G-170907-RA-23	Air	09/07/17 12:31	09/12/17 09:30
320-31467-33	G-170907-RA-24	Air	09/07/17 12:32	09/12/17 09:30
320-31467-34	G-170907-RA-25	Air	09/07/17 13:24	09/12/17 09:30
320-31467-35	G-170907-RA-26	Air	09/07/17 13:23	09/12/17 09:30
320-31467-36	G-170907-RA-27	Air	09/07/17 13:25	09/12/17 09:30
320-31467-37	G-170907-RA-28	Air	09/07/17 13:24	09/12/17 09:30
320-31467-38	G-170907-RA-29	Air	09/07/17 13:34	09/12/17 09:30
320-31467-39	G-170907-RA-30	Air	09/07/17 13:31	09/12/17 09:30
320-31467-40	G-170907-RA-31	Air	09/07/17 13:32	09/12/17 09:30
320-31467-41	G-170907-RA-32	Air	09/07/17 12:36	09/12/17 09:30
320-31467-42	G-170907-RA-33	Air	09/07/17 12:36	09/12/17 09:30

TestAmerica Sacramento

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

TestAmerica Laboratories, Inc.

Client Contact Information		Project Manager: <u>Sam & Leij</u>		Samples Collected By: <u>RHymet</u>		COC No: <u>2</u> of <u>2</u> COCs	
Company Name: <u>GAAD</u>	Phone:	Project Manager: <u>Sam & Leij</u>	Flow Controller ID	Canister ID	Other (Please specify in notes section)	Sample Type	Other (Please specify in notes section)
Address: <u>1809 Q2 Highway 8 NW</u>	Email:	Site Contact: <u>Grant Anderson</u>	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	Landfill Gas	Indoor Air	Soil Gas
City/State/Zip: <u>St Paul MN 55112</u>	Phone: <u>651-639-6913</u>	TA Contact:	Time Start	Time Stop	Ambient Air	TO-3	ASTM D-1946 / 1945 / 3588
Phone: <u>651-639-6913</u>	FAX:	Analysis Turnaround Time	Sample Date(s)	Canister ID	MA-APH	EPA 15/16	EPA 25C / 25.3
Project Name: <u>98751</u>	Site/Location: <u>SLP</u>	Standard (Specific):	Sample Date(s)	Flow Controller ID	EPA 3C	EPA 3C	EPA 3C
P.O. #	Rush (Specify):		Sample Date(s)	Canister ID	TO-15 (Med / Sid / Low / SIM)	MA-APH	MA-APH
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, 'Hg (Start)'	Canister Vacuum in Field, 'Hg (Stop)'	TO-15 (Med / Sid / Low / SIM)	MA-APH
<u>6-170907-PA-11</u>	<u>9/17/17</u>	<u>9:39</u>	<u>9:48</u>	<u>-30</u>	<u>-5</u>	<u>X</u>	<u>X</u>
<u>PA-12</u>	<u>9:39</u>	<u>9:48</u>	<u>9:55</u>	<u>-30</u>	<u>-5</u>	<u>X</u>	<u>X</u>
<u>PA-13</u>	<u>9:48</u>	<u>10:33</u>	<u>10:33</u>	<u>-30</u>	<u>-5</u>	<u>X</u>	<u>X</u>
<u>PA-14</u>	<u>10:33</u>	<u>10:33</u>	<u>10:33</u>	<u>-30</u>	<u>-5</u>	<u>X</u>	<u>X</u>
<u>PA-15</u>	<u>10:33</u>	<u>10:33</u>	<u>10:33</u>	<u>-30</u>	<u>-5</u>	<u>X</u>	<u>X</u>
<u>PA-16</u>	<u>10:33</u>	<u>10:33</u>	<u>10:33</u>	<u>-30</u>	<u>-5</u>	<u>X</u>	<u>X</u>
<u>PA-17</u>	<u>10:33</u>	<u>10:37</u>	<u>10:37</u>	<u>-30</u>	<u>-5</u>	<u>X</u>	<u>X</u>
<u>PA-18</u>	<u>10:47</u>	<u>10:57</u>	<u>10:57</u>	<u>-30</u>	<u>-5</u>	<u>X</u>	<u>X</u>
<u>PA-19</u>	<u>10:47</u>	<u>10:55</u>	<u>10:55</u>	<u>-30</u>	<u>-5</u>	<u>X</u>	<u>X</u>
<u>6-170907-PA-20</u>	<u>10:47</u>	<u>10:56</u>	<u>10:56</u>	<u>-38</u>	<u>-5</u>	<u>X</u>	<u>X</u>
Temperature (Fahrenheit)		Start	Interior	Ambient	Stop	70	70
Temperature (Fahrenheit)		Start	Interior	Ambient	Stop	70	70
Special Instructions/QC Requirements & Comments:							
Samples Shipped by:	Date / Time:	Date / Time:		Date / Time:		Date / Time:	
<u>[Signature]</u>	<u>9/17/17 1600</u>	<u>9/17/17 930</u>		<u>9/17/17 930</u>		<u>9/17/17 930</u>	
Samples Relinquished by:	Date / Time:	Date / Time:		Date / Time:		Date / Time:	
Relinquished by:	Date / Time:	Date / Time:		Date / Time:		Date / Time:	
Lab Use Only:	Shipper Name:	Opened by:		Condition:		Condition:	



TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

TestAmerica Laboratories, Inc.

Client Contact Information		Project Manager: <i>Sanjay</i>		Samples Collected By: <i>Rahmat</i>		COC No: <i>3</i> of <i>2</i> COCs	
Company Name: <i>CAAD</i>	Phone:	Project Manager: <i>Sanjay</i>	Phone:	Other (Please specify in notes section)	Landfill Gas	Soil Gas	Other (Please specify in notes section)
Address: <i>1801 Q St Highway 8 NW</i>	Email:	Site Contact: <i>Grant Anderson</i>	Email:	Indoor Air	Ambient Air	Ambient Air	For Lab Use Only:
City/State/Zip: <i>St Paul MN 55112</i>	Phone: <i>651-639-0913</i>	TA Contact:	Phone:	Sample Type	TO-3	TO-3	Walk-in Client:
Phone: <i>651-639-0913</i>	FAX:	Analysis Turnaround Time	Phone:	Other (Please specify in notes section)	EPA 15/16	EPA 15/16	Lab Sampling:
Project Name: <i>88751</i>	Standard (Specific):	Rush (Specify):	Phone:	MA-APH	ASTM D-1946 / 1945 / 3588	ASTM D-1946 / 1945 / 3588	Job / SDG No.:
Site/Location: <i>SLP</i>	Canister Vacuum in Field, 'Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Phone:	TO-15 (Med / Sid / Low / SIM)	EPA 25C / 25.3	EPA 25C / 25.3	(See below for Add'l Items)
P O #	Sample Date(s)	Time Start	Time Stop	Flow Controller ID	EPA 3C	EPA 3C	Sample Specific Notes:
<i>6-170906-BA-01</i>	<i>9/6/17</i>	<i>1234</i>	<i>1243</i>	<i>7542</i>	<i>1191</i>	<i>1191</i>	
<i>BA-02</i>	<i>1257</i>	<i>1306</i>	<i>1306</i>	<i>7503</i>	<i>8222</i>	<i>8222</i>	
<i>BA-03</i>	<i>1319</i>	<i>1349</i>	<i>1349</i>	<i>7083</i>	<i>628</i>	<i>628</i>	
<i>BA-04</i>	<i>1424</i>	<i>1434</i>	<i>1434</i>	<i>7323</i>	<i>928</i>	<i>928</i>	
<i>BA-05</i>	<i>1424</i>	<i>1432</i>	<i>1432</i>	<i>7233</i>	<i>229</i>	<i>229</i>	
<i>BA-06</i>	<i>1424</i>	<i>1449</i>	<i>1449</i>	<i>7671</i>	<i>1089</i>	<i>1089</i>	
<i>BA-07</i>	<i>1505</i>	<i>1515</i>	<i>1515</i>	<i>8473</i>	<i>8725</i>	<i>8725</i>	
<i>6-170906-BA-08</i>	<i>1505</i>	<i>1514</i>	<i>1514</i>	<i>731</i>	<i>8506</i>	<i>8506</i>	
<i>6-170907-BA-05</i>	<i>9/7/17</i>	<i>939</i>	<i>948</i>	<i>7139</i>	<i>1205</i>	<i>1205</i>	
<i>6-170907-BA-10</i>	<i>9/7/17</i>	<i>864</i>	<i>876</i>	<i>8649</i>	<i>616</i>	<i>616</i>	
		Temperature (Fahrenheit)					
Start	Interior	70	Ambient	7-			
Stop				7.			
		Temperature (Fahrenheit)					
Start	Interior		Ambient				
Stop							
Special Instructions/QC Requirements & Comments:							
<i>* Canister was void w/ valve unattached 29/2/17</i>							
Samples Shipped by:		Date / Time: <i>9/18/17 1600</i>		Samples Received by:		Date / Time: <i>9/21/17 930 TAW</i>	
Samples Relinquished by:		Date / Time:		Received by:		Date / Time:	
Relinquished by:		Date / Time:		Received by:		Date / Time:	
Lab Use Only:		Shipper Name:		Condition:		Opened by:	



TestAmerica Sacramento
880 Riverside Parkway

West Sacramento, CA 95605
phone 916.374.4378 fax 916.372.1059

Canister Samples Chain of Custody Record

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact Information		Project Manager: <i>Sandra Long</i>		Samples Collected By: <i>Ryan Mot</i>		COC No: <i>5</i> of <i>5</i> COCs									
Company Name: <i>GAD</i>	Phone:	Project Name: <i>98751</i>	Analysis Turnaround Time	TO-15 (Med / Std / Low / SIM)	MA-APH	EPA 3C	EPA 25C / 25.3								
Address: <i>1801 Old Highway 8 NW</i>	Email:	Standard (Specific):	Standard (Specify):	ASTM D-1946 / 1945 / 3588	EPA 15/16	TO-3	Other (Please specify in notes section)								
City/State/Zip: <i>St Paul MN 55112</i>	Site Contact: <i>Grant Anderson</i>	Rush (Specify):	Canister Vacuum in Field, 'Hg (Start)'	EPA 3C	MA-APH	EPA 25C / 25.3	Landfill Gas								
Phone: <i>651-439-6913</i>	TA Contact:	Time Start	Canister Vacuum in Field, 'Hg (Stop)'	MA-APH	EPA 25C / 25.3	TO-3	Soil Gas								
FAX:	Project Name: <i>98751</i>	Time Stop	Time Stop	MA-APH	EPA 25C / 25.3	TO-3	Ambient Air								
Site/Location: <i>SLP</i>	Site/Location: <i>SLP</i>	Sample Date(s)	Canister Vacuum in Field, 'Hg (Start)'	MA-APH	EPA 25C / 25.3	TO-3	Indoor Air								
P.O #	Project Name: <i>98751</i>	Sample Date(s)	Canister Vacuum in Field, 'Hg (Stop)'	MA-APH	EPA 25C / 25.3	TO-3	Other (Please specify in notes section)								
<i>6-170907-PA-31</i>	<i>9/17/17</i>	<i>1337</i>	<i>-30</i>	<i>-2</i>	<i>7696</i>	<i>1008</i>	<i>X</i>	Sample Specific Notes:							
<i>6-170907-PA-32</i>	<i>10/26</i>	<i>1236</i>	<i>-30</i>	<i>-5</i>	<i>7781</i>	<i>1079</i>	<i>X</i>								
<i>6-170907-PA-33</i>	<i>10/26</i>	<i>1236</i>	<i>-30</i>	<i>-5</i>	<i>7693</i>	<i>867</i>	<i>X</i>								
<table border="1"> <thead> <tr> <th colspan="2">Temperature (Fahrenheit)</th> </tr> <tr> <th>Start</th> <th>Stop</th> </tr> </thead> <tbody> <tr> <td>Interior <i>70</i></td> <td>Interior <i>70</i></td> </tr> <tr> <td>Ambient <i>70</i></td> <td>Ambient <i>70</i></td> </tr> </tbody> </table>								Temperature (Fahrenheit)		Start	Stop	Interior <i>70</i>	Interior <i>70</i>	Ambient <i>70</i>	Ambient <i>70</i>
Temperature (Fahrenheit)															
Start	Stop														
Interior <i>70</i>	Interior <i>70</i>														
Ambient <i>70</i>	Ambient <i>70</i>														
<table border="1"> <thead> <tr> <th colspan="2">Temperature (Fahrenheit)</th> </tr> <tr> <th>Start</th> <th>Stop</th> </tr> </thead> <tbody> <tr> <td>Interior</td> <td>Interior</td> </tr> <tr> <td>Ambient</td> <td>Ambient</td> </tr> </tbody> </table>								Temperature (Fahrenheit)		Start	Stop	Interior	Interior	Ambient	Ambient
Temperature (Fahrenheit)															
Start	Stop														
Interior	Interior														
Ambient	Ambient														
Special Instructions/QC Requirements & Comments:															
Samples Shipped by: <i>TL</i>		Date / Time: <i>9/20/17 1600</i>		Samples Received by: <i>John Huber 9/20/17 930 AM</i>											
Samples Relinquished by:		Date / Time:		Received by:											
Relinquished by:		Date / Time:		Received by:											
Lab Use Only:		Shipper Name:		Condition:											



JOB # **320-31467**
Sample # **1**

Client/Project:		VFR ID:	
Canister Serial #:	3318	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.52	09/14/17	RG	
FINAL PRESSURE (PSIA)	22.76	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.98			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.98		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors							
	Date	Instr.	File #				
Canister DF = 1.98 X	9/21/2017	MS9		=	FINAL DF	3.292824074	
					Load DF = 1.6666667 X		
					250	Bag DF = 1	
					150	BVf (mLs)	
				Bvi (mLs)			
Canister DF = 1.98 X	9/22/2017	MS9		=	FINAL DF	0.997825477	
					Load DF = 0.5050505 X		
					LVf (mLs)	250	Bag DF = 1
					LVi (mLs)	495	BVf (mLs)
				Bvi (mLs)			
Canister DF = 1.98 X				=	FINAL DF	#DIV/0!	
					Load DF = #DIV/0! X		
					LVf (mLs)		Bag DF = 1
					LVi (mLs)		BVf (mLs)
				Bvi (mLs)			

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JOB # **320-31467**
Sample # **2**

Client/Project:	VFR ID:	
Canister Serial #: 34000627	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	12.23	09/14/17	RG	
FINAL PRESSURE (PSIA)	22.71	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.86			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.86		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 1.86	9/21/2017	MS9		X	Load DF = 0.5387931	X
					250	
					464	
					Bag DF = 1	=
					BVf (mLs)	FINAL DF
					Bvi (mLs)	1.000489892
Canister DF = 1.86				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	#DIV/0!
					Bvi (mLs)	
Canister DF = 1.86				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	#DIV/0!
					Bvi (mLs)	



JOB # **320-31467**
Sample # **3**

Client/Project:		VFR ID:	
Canister Serial #:	34001118	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	12.04	09/14/17	RG	
FINAL PRESSURE (PSIA)	22.90	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.90			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.90		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 1.90	X	Load DF = 1.25	X	Bag DF = 1	=	FINAL DF 2.377491694
		250		BVf (mLs)		
		200		Bvi (mLs)		
Canister DF = 1.90	X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		Bvi (mLs)		
Canister DF = 1.90	X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		Bvi (mLs)		



JOB # **320-31467**
Sample # **4**

Client/Project:	VFR ID:	
Canister Serial #: 8511	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.49	09/14/17	RG	
FINAL PRESSURE (PSIA)	22.53	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.96			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.96		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 1.96	9/21/2017	MS9		X	Load DF = 3.3333333	X
					250	
					75	
					Bag DF = 1	=
					BVf (mLs)	FINAL DF
					Bvi (mLs)	6.536118364
Canister DF = 1.96				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	#DIV/0!
					Bvi (mLs)	
Canister DF = 1.96				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	#DIV/0!
					Bvi (mLs)	



JOB # **320-31467**
Sample # **6**

Client/Project:		VFR ID:	
Canister Serial #:	34001189	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	14.26	09/14/17	RG	
FINAL PRESSURE (PSIA)	23.23	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.63			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.63		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF =	9/21/2017	MS9				
1.63				X	Load DF =	0.6142506
						250
						407
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	1.000634065
					FINAL DF	
Canister DF =					Load DF =	#DIV/0!
1.63				X	LVf (mLs)	
					LVi (mLs)	
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	#DIV/0!
					FINAL DF	
Canister DF =					Load DF =	#DIV/0!
1.63				X	LVf (mLs)	
					LVi (mLs)	
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	#DIV/0!
					FINAL DF	



JOB # **320-31467**
Sample # **7**

Client/Project:		VFR ID:	
Canister Serial #:	34000904	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	12.19	09/14/17	RG	
FINAL PRESSURE (PSIA)	23.01	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.89			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.89		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 1.89 X	9/21/2017	MS9		Load DF = 0.5307856 X	Bag DF = 1 =	FINAL DF 1.001917621
				250	BVf (mLs)	
				471	Bvi (mLs)	
Canister DF = 1.89 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	
Canister DF = 1.89 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	



JOB # **320-31467**
Sample # **8**

Client/Project:		VFR ID:	
Canister Serial #:	34000898	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.80	09/14/17	RG	
FINAL PRESSURE (PSIA)	22.51	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.91			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.91		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF =	9/21/2017	MS9				
1.91				X	Load DF =	0.5252101
						250
						476
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	1.001904999
					FINAL DF	
Canister DF =					Load DF =	#DIV/0!
1.91				X	LVf (mLs)	
					LVi (mLs)	
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	#DIV/0!
					FINAL DF	
Canister DF =					Load DF =	#DIV/0!
1.91				X	LVf (mLs)	
					LVi (mLs)	
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	#DIV/0!
					FINAL DF	



JOB # **320-31467**
Sample # **9**

Client/Project:		VFR ID:	
Canister Serial #:	34001967	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.61	09/14/17	RG	
FINAL PRESSURE (PSIA)	23.26	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.00			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.00		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.00 X	9/21/2017	MS9		Load DF = 0.5 X	Bag DF = 1	FINAL DF = 1.001722653
				250	BVf (mLs)	
				500	Bvi (mLs)	
Canister DF = 2.00 X				Load DF = #DIV/0! X	Bag DF = 1	FINAL DF = #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	
Canister DF = 2.00 X				Load DF = #DIV/0! X	Bag DF = 1	FINAL DF = #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	



JOB # **320-31467**
Sample # **10**

Client/Project:		VFR ID:	
Canister Serial #:	34000672	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.68	09/14/17	RG	
FINAL PRESSURE (PSIA)	22.56	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.93			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.93		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF =	9/21/2017	MS9		FINAL DF		
1.93				1.001818905		
X						
Load DF =						
0.5186722						
X						
Bag DF =						
1						
BVf (mLs)						
Bvi (mLs)						

	Date	Instr.	File #			
Canister DF =				FINAL DF		
1.93				#DIV/0!		
X						
Load DF =						
#DIV/0!						
X						
Bag DF =						
1						
BVf (mLs)						
Bvi (mLs)						

	Date	Instr.	File #			
Canister DF =				FINAL DF		
1.93				#DIV/0!		
X						
Load DF =						
#DIV/0!						
X						
Bag DF =						
1						
BVf (mLs)						
Bvi (mLs)						



JOB # **320-31467**
Sample # **11**

Client/Project:	VFR ID:	
Canister Serial #: 34001219	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.37	09/14/17	RG	
FINAL PRESSURE (PSIA)	22.55	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.98			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.98		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 1.98	9/21/2017	ATMS2		X	Load DF = 0.5050505	X
					250	
					495	
					Bag DF = 1	=
					BVf (mLs)	FINAL DF
					Bvi (mLs)	1.001661292
Canister DF = 1.98				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	#DIV/0!
					Bvi (mLs)	
Canister DF = 1.98				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	#DIV/0!
					Bvi (mLs)	



JOB # **320-31467**
Sample # **13**

Client/Project:		VFR ID:	
Canister Serial #:	34000812	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.29	09/14/17	RG	
FINAL PRESSURE (PSIA)	22.34	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.98			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.98		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF =	9/21/2017	ATMS2				
1.98				X	Load DF =	0.5050505
						250
						495
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	0.999364773
					FINAL DF	
Canister DF =					Load DF =	#DIV/0!
1.98				X	LVf (mLs)	
					LVi (mLs)	
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	#DIV/0!
					FINAL DF	
Canister DF =					Load DF =	#DIV/0!
1.98				X	LVf (mLs)	
					LVi (mLs)	
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	#DIV/0!
					FINAL DF	



JOB # **320-31467**
Sample # **14**

Client/Project:	VFR ID:	
Canister Serial #: 34001065	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.97	09/14/17	RG	
FINAL PRESSURE (PSIA)	24.97	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.09			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/21/17	14.97	20.85	2.09	GKI	2.91
			2.91		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.91 X	9/21/2017	ATMS2		Load DF = 0.3571429 X	Bag DF = 1 =	FINAL DF 1.039285714
				250	BVf (mLs)	
				700	Bvi (mLs)	
Canister DF = 2.09 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	
Canister DF = 2.09 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	



JOB # **320-31467**
Sample # **15**

Client/Project:		VFR ID:	
Canister Serial #:	34000802	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	13.95	09/14/17	RG	
FINAL PRESSURE (PSIA)	22.72	09/14/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.63			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.63		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF =	9/21/2017	ATMS2				
1.63				X	Load DF =	0.617284
						250
						405
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	1.005354219
					FINAL DF	
Canister DF =					Load DF =	#DIV/0!
1.63				X	LVf (mLs)	
					LVi (mLs)	
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	#DIV/0!
					FINAL DF	
Canister DF =					Load DF =	#DIV/0!
1.63				X	LVf (mLs)	
					LVi (mLs)	
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	#DIV/0!
					FINAL DF	



JOB # **320-31467**
Sample # **16**

Client/Project:	VFR ID:	
Canister Serial #: 34000234	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	2.52	09/18/17	GKI	
FINAL PRESSURE (PSIA)	16.90	09/18/17	GKI	
Pressurization Gas: <input checked="" type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	6.71			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/21/17	16.02	19.84	6.71	GKI	8.31
			8.31		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 8.31 X	9/21/2017	ATMS2		Load DF = 0.3333333 X	Bag DF = 1	FINAL DF = 2.77
				<input type="text" value="250"/> <input type="text" value="750"/>	BVf (mLs) Bvi (mLs)	
Canister DF = 6.71 X				Load DF = #DIV/0! X	Bag DF = 1	FINAL DF = #DIV/0!
				LVf (mLs) LVi (mLs)	BVf (mLs) Bvi (mLs)	
Canister DF = 6.71 X				Load DF = #DIV/0! X	Bag DF = 1	FINAL DF = #DIV/0!
				LVf (mLs) LVi (mLs)	BVf (mLs) Bvi (mLs)	



JOB # **320-31467**
Sample # **17**

Client/Project:		VFR ID:	
Canister Serial #:	8502	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.77	09/18/17	GKI	
FINAL PRESSURE (PSIA)	25.99	09/18/17	GKI	
Pressurization Gas: <input checked="" type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.21			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/21/17	15.07	19.31	2.21	GKI	2.83
			2.83		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.83 X	9/21/2017	ATMS2		Load DF = 0.3546099 X	Bag DF = 1 =	FINAL DF 1.003546099
				250	BVf (mLs)	
				705	Bvi (mLs)	
Canister DF = 2.21 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	
Canister DF = 2.21 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	



JOB # **320-31467**
Sample # **18**

Client/Project:		VFR ID:	
Canister Serial #:	8324	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	12.02	09/18/17	GKI	
FINAL PRESSURE (PSIA)	25.16	09/18/17	GKI	
Pressurization Gas: <input checked="" type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.09			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.09		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors										
Canister DF =	2.09	X	Load DF =	0.4807692	X	Bag DF =	1	=	FINAL DF	1.006335595
				250		BVf (mLs)				
				520		Bvi (mLs)				
Canister DF =	2.09	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
						BVf (mLs)				
						Bvi (mLs)				
Canister DF =	2.09	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
						BVf (mLs)				
						Bvi (mLs)				



JOB # **320-31467**
Sample # **19**

Client/Project:	VFR ID:	
Canister Serial #: 34000650	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.98	09/18/17	GKI	
FINAL PRESSURE (PSIA)	24.90	09/18/17	GKI	
Pressurization Gas: <input checked="" type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.08			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.08		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.08 X	9/21/2017	ATMS2		Load DF = 0.4807692 X	Bag DF = 1 =	FINAL DF 0.99926159
				250	BVf (mLs)	
				520	Bvi (mLs)	
Canister DF = 2.08 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	
Canister DF = 2.08 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	



JOB # **320-31467**
Sample # **20**

Client/Project:		VFR ID:	
Canister Serial #:	34001191	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.78	09/18/17	GKI	
FINAL PRESSURE (PSIA)	24.93	09/18/17	GKI	
Pressurization Gas: <input checked="" type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.12			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.12		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors										
	Date	Instr.	File #							
Canister DF =	2.12	X	Load DF =	0.4725898	X	Bag DF =	1	=	FINAL DF	1.000141215
				250		BVf (mLs)				
				529		Bvi (mLs)				
Canister DF =	2.12	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
				LVf (mLs)		BVf (mLs)				
				LVi (mLs)		Bvi (mLs)				
Canister DF =	2.12	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
				LVf (mLs)		BVf (mLs)				
				LVi (mLs)		Bvi (mLs)				



JOB # **320-31467**
Sample # **21**

Client/Project:		VFR ID:	
Canister Serial #:	8282	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.88	09/18/17	GKI	
FINAL PRESSURE (PSIA)	26.39	09/18/17	GKI	
Pressurization Gas: <input checked="" type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.22			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
09/25/17	14.18	19.08	2.22	GKI	2.99
			2.99		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.22 X	9/22/2017	MS2		=	FINAL DF	1.000621834
	Load DF = 0.4504505 X					
Canister DF = 2.99 X				=	FINAL DF	1.003355705
	Load DF = 0.3355705 X					
Canister DF = 2.22 X				=	FINAL DF	#DIV/0!
	Load DF = #DIV/0! X					



JOB # **320-31467**
Sample # **22**

Client/Project:		VFR ID:	
Canister Serial #:	34000628	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	12.70	09/18/17	GKI	
FINAL PRESSURE (PSIA)	26.37	09/18/17	GKI	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.08			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.08		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.08	X	Load DF = 0.4807692	X	Bag DF = 1	=	FINAL DF 0.998258631
		250		BVf (mLs)		
		520		Bvi (mLs)		
Canister DF = 2.08	X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		Bvi (mLs)		
Canister DF = 2.08	X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		Bvi (mLs)		



JOB # **320-31467**
Sample # **23**

Client/Project:	VFR ID:	
Canister Serial #: 34000928	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	12.40	09/18/17	GKI	
FINAL PRESSURE (PSIA)	25.05	09/18/17	GKI	
Pressurization Gas: <input checked="" type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.02			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.02		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.02	9/22/2017	MS2		X	Load DF = 0.4950495	X
					250	
					505	
					Bag DF = 1	=
					BVf (mLs)	FINAL DF
					Bvi (mLs)	1.000079847
Canister DF = 2.02				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	#DIV/0!
					Bvi (mLs)	
Canister DF = 2.02				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	#DIV/0!
					Bvi (mLs)	



JOB # **320-31467**
Sample # **24**

Client/Project:	VFR ID:	
Canister Serial #: 34000229	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.57	09/18/17	GKI	
FINAL PRESSURE (PSIA)	25.23	09/18/17	GKI	
Pressurization Gas: <input checked="" type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.18			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.18		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.18	9/22/2017	MS2	FINAL DF	X	1	1.000293388
					250	
					545	
					BVf (mLs)	
					Bvi (mLs)	
Canister DF = 2.18			FINAL DF	X	1	#DIV/0!
					LVf (mLs)	
					LVi (mLs)	
					BVf (mLs)	
					Bvi (mLs)	
Canister DF = 2.18			FINAL DF	X	1	#DIV/0!
					LVf (mLs)	
					LVi (mLs)	
					BVf (mLs)	
					Bvi (mLs)	



JOB # **320-31467**
Sample # **25**

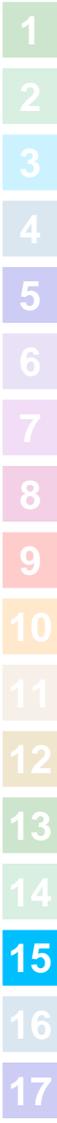
Client/Project:	VFR ID:		
Canister Serial #: 34001089	Duration:	<input type="checkbox"/> Hrs	<input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min	
Client ID:	Initials:		
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	14.82	09/18/17	GKI	
FINAL PRESSURE (PSIA)	24.21	09/18/17	GKI	
Pressurization Gas: <input checked="" type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.63			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.63		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 1.63	9/22/2017	MS2		X	Load DF = 0.6142506	FINAL DF = 1.003441793
					250	
					407	
					BVf (mLs)	
					BVi (mLs)	
Canister DF = 1.63				X	Load DF = #DIV/0!	FINAL DF = #DIV/0!
					LVf (mLs)	
					LVi (mLs)	
					BVf (mLs)	
					BVi (mLs)	
Canister DF = 1.63				X	Load DF = #DIV/0!	FINAL DF = #DIV/0!
					LVf (mLs)	
					LVi (mLs)	
					BVf (mLs)	
					BVi (mLs)	



JOB # **320-31467**
Sample # **26**

Client/Project:		VFR ID:	
Canister Serial #:	8325	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING		PRESS.	DATE	INITIALS
INITIAL VACUUM CHECK (INCHES Hg)		29.8		JMT
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)		11.67	09/18/17	RG
FINAL PRESSURE (PSIA)		23.17	09/18/17	RG
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He		SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	1.99			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.99		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors										
Canister DF =	1.99	X	Load DF =	2.7173913	X	Bag DF =	1	=	FINAL DF	5.395197645
				250		BVf (mLs)				
				92		Bvi (mLs)				
Canister DF =	1.99	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
						BVf (mLs)				
						Bvi (mLs)				
Canister DF =	1.99	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
						BVf (mLs)				
						Bvi (mLs)				

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JOB # **320-31467**
Sample # **27**

Client/Project:		VFR ID:	
Canister Serial #:	8506	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	12.29	09/18/17	RG	
FINAL PRESSURE (PSIA)	23.15	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.88			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.88		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 1.88 X	9/22/2017	MS2		Load DF = 1.8248175 X	Bag DF = 1 =	FINAL DF 3.437308832
				LVf (mLs) 250	BVf (mLs)	
				LVi (mLs) 137	BVi (mLs)	
Canister DF = 1.88 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	BVi (mLs)	
Canister DF = 1.88 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	BVi (mLs)	



JOB # **320-31467**
Sample # **28**

Client/Project:	VFR ID:	
Canister Serial #: 34001225	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	14.36	09/18/17	RG	
FINAL PRESSURE (PSIA)	24.19	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.68			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.68		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 1.68	9/22/2017	MS2		X	Load DF = 0.7692308	X
					250	
					325	
					Bag DF = 1	=
					BVf (mLs)	FINAL DF
					Bvi (mLs)	1.2958003
Canister DF = 1.68				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	FINAL DF
					Bvi (mLs)	#DIV/0!
Canister DF = 1.68				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	FINAL DF
					Bvi (mLs)	#DIV/0!



JOB # **320-31467**
Sample # **29**

Client/Project:		VFR ID:	
Canister Serial #:	34000616	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.93	09/18/17	RG	
FINAL PRESSURE (PSIA)	24.32	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.04			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.04		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.04 X	9/22/2017	MS2		Load DF = 0.4901961 X	Bag DF = 1 =	FINAL DF 0.999293263
				250	BVf (mLs)	
				510	Bvi (mLs)	
Canister DF = 2.04 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	
Canister DF = 2.04 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	



JOB # **320-31467**
Sample # **30**

Client/Project:	VFR ID:	
Canister Serial #: 34000683	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	12.46	09/18/17	RG	
FINAL PRESSURE (PSIA)	24.32	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.95			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.95		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 1.95	9/22/2017	MS2		X	Load DF = 0.6666667	X
					250	Bag DF = 1
					375	BVf (mLs)
						Bvi (mLs)
						= FINAL DF 1.301230605
Canister DF = 1.95				X	Load DF = #DIV/0!	X
					LVf (mLs)	Bag DF = 1
					LVi (mLs)	BVf (mLs)
						Bvi (mLs)
						= FINAL DF #DIV/0!
Canister DF = 1.95				X	Load DF = #DIV/0!	X
					LVf (mLs)	Bag DF = 1
					LVi (mLs)	BVf (mLs)
						Bvi (mLs)
						= FINAL DF #DIV/0!



JOB # **320-31467**
Sample # **31**

Client/Project:		VFR ID:	
Canister Serial #:	34000944	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.98	09/18/17	RG	
FINAL PRESSURE (PSIA)	24.20	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.02			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.02		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.02 X	9/22/2017	MS2		Load DF = 0.4950495 X	Bag DF = 1 =	FINAL DF 1.000016529
				250	BVf (mLs)	
				505	Bvi (mLs)	
Canister DF = 2.02 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	
Canister DF = 2.02 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	



JOB # **320-31467**
Sample # **32**

Client/Project:		VFR ID:	
Canister Serial #:	34000974	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.35	09/18/17	RG	
FINAL PRESSURE (PSIA)	24.31	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.14			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.14		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors										
	Date	Instr.	File #							
Canister DF =	2.14	X	Load DF =	0.4672897	X	Bag DF =	1	=	FINAL DF	1.000864589
				250		BVf (mLs)				
				535		Bvi (mLs)				
Canister DF =	2.14	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
				LVf (mLs)		BVf (mLs)				
				LVi (mLs)		Bvi (mLs)				
Canister DF =	2.14	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
				LVf (mLs)		BVf (mLs)				
				LVi (mLs)		Bvi (mLs)				



JOB # **320-31467**
Sample # **33**

Client/Project:		VFR ID:	
Canister Serial #:	34001645	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.77	09/18/17	RG	
FINAL PRESSURE (PSIA)	24.36	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.07			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.07		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors										
	Date	Instr.	File #							
Canister DF =	2.07	X	Load DF =	0.4826255	X	Bag DF =	1	=	FINAL DF	0.998874831
				250		BVf (mLs)				
				518		Bvi (mLs)				
Canister DF =	2.07	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
				LVf (mLs)		BVf (mLs)				
				LVi (mLs)		Bvi (mLs)				
Canister DF =	2.07	X	Load DF =	#DIV/0!	X	Bag DF =	1	=	FINAL DF	#DIV/0!
				LVf (mLs)		BVf (mLs)				
				LVi (mLs)		Bvi (mLs)				



JOB # **320-31467**
Sample # **34**

Client/Project:	VFR ID:		
Canister Serial #: 3400932	Duration:	<input type="checkbox"/> Hrs	<input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min	
Client ID:	Initials:		
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	10.69	09/18/17	RG	
FINAL PRESSURE (PSIA)	24.10	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.25			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.25		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors									
	Date	Instr.	File #						
Canister DF = 2.25	9/22/2017	ATMS9		X	Load DF = 0.4440497	X	Bag DF = 1	=	FINAL DF 1.001084993
					250		BVf (mLs)		
					563		Bvi (mLs)		
Canister DF = 2.25				X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
					LVf (mLs)		BVf (mLs)		
					LVi (mLs)		Bvi (mLs)		
Canister DF = 2.25				X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
					LVf (mLs)		BVf (mLs)		
					LVi (mLs)		Bvi (mLs)		



JOB # **320-31467**
Sample # **35**

Client/Project:		VFR ID:	
Canister Serial #:	34000622	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.21	09/18/17	RG	
FINAL PRESSURE (PSIA)	26.50	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.36			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.36		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.36	X	Load DF = 0.4237288	X	Bag DF = 1	=	FINAL DF 1.001678284
		250		BVf (mLs)		
		590		Bvi (mLs)		
Canister DF = 2.36	X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		Bvi (mLs)		
Canister DF = 2.36	X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
		LVf (mLs)		BVf (mLs)		
		LVi (mLs)		Bvi (mLs)		



JOB # **320-31467**
Sample # **36**

Client/Project:		VFR ID:	
Canister Serial #:	34001382	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.36	09/18/17	RG	
FINAL PRESSURE (PSIA)	25.55	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.25			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.25		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.25 X	9/22/2017	ATMS9		Load DF = 0.7163324 X	Bag DF = 1 =	FINAL DF 1.611117277
				250	BVf (mLs)	
				349	Bvi (mLs)	
Canister DF = 2.25 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	
Canister DF = 2.25 X				Load DF = #DIV/0! X	Bag DF = 1 =	FINAL DF #DIV/0!
				LVf (mLs)	BVf (mLs)	
				LVi (mLs)	Bvi (mLs)	



JOB # **320-31467**
Sample # **37**

Client/Project:		VFR ID:	
Canister Serial #:	34000316	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.17	09/18/17	RG	
FINAL PRESSURE (PSIA)	24.31	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.18			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.18		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors									
	Date	Instr.	File #						
Canister DF = 2.18	9/22/2017	ATMS9		X	Load DF = 1.9685039	X	Bag DF = 1	=	FINAL DF 4.284183591
					250		BVf (mLs)		
					127		Bvi (mLs)		
Canister DF = 2.18				X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
					LVf (mLs)		BVf (mLs)		
					LVi (mLs)		Bvi (mLs)		
Canister DF = 2.18				X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
					LVf (mLs)		BVf (mLs)		
					LVi (mLs)		Bvi (mLs)		



JOB # **320-31467**
Sample # **38**

Client/Project:		VFR ID:	
Canister Serial #:	34000914	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.78	09/18/17	RG	
FINAL PRESSURE (PSIA)	24.90	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.11			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.11		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors									
	Date	Instr.	File #						
Canister DF = 2.11	9/22/2017	ATMS9		X	Load DF = 1.0683761	X	Bag DF = 1	=	FINAL DF 2.258282182
					250		BVf (mLs)		
					234		BVi (mLs)		
Canister DF = 2.11				X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
					LVf (mLs)		BVf (mLs)		
					LVi (mLs)		BVi (mLs)		
Canister DF = 2.11				X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
					LVf (mLs)		BVf (mLs)		
					LVi (mLs)		BVi (mLs)		



JOB # **320-31467**
Sample # **39**

Client/Project:	VFR ID:		
Canister Serial #: 34001671	Duration:	<input type="checkbox"/> Hrs	<input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min	
Client ID:	Initials:		
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.02	09/18/17	RG	
FINAL PRESSURE (PSIA)	23.59	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.14			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.14		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors									
	Date	Instr.	File #						
Canister DF = 2.14	9/22/2017	ATMS9		X	Load DF = 1.0162602	X	Bag DF = 1	=	FINAL DF 2.175460729
					250		BVf (mLs)		
					246		Bvi (mLs)		
Canister DF = 2.14				X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
					LVf (mLs)		BVf (mLs)		
					LVi (mLs)		Bvi (mLs)		
Canister DF = 2.14				X	Load DF = #DIV/0!	X	Bag DF = 1	=	FINAL DF #DIV/0!
					LVf (mLs)		BVf (mLs)		
					LVi (mLs)		Bvi (mLs)		



JOB # **320-31467**
Sample # **40**

Client/Project:		VFR ID:	
Canister Serial #:	34001008	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	14.24	09/18/17	RG	
FINAL PRESSURE (PSIA)	27.01	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	1.90			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.90		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF =	9/22/2017	ATMS9				
1.90				X	Load DF =	0.5263158
						250
						475
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	0.998299823
					FINAL DF	
Canister DF =					Load DF =	#DIV/0!
1.90				X	LVf (mLs)	
					LVi (mLs)	
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	#DIV/0!
					FINAL DF	
Canister DF =					Load DF =	#DIV/0!
1.90				X	LVf (mLs)	
					LVi (mLs)	
					Bag DF =	1
					BVf (mLs)	
					Bvi (mLs)	
					=	#DIV/0!
					FINAL DF	



JOB # **320-31467**
Sample # **42**

Client/Project:	VFR ID:	
Canister Serial #: 34000867	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:	Flow:	mL/min
Client ID:	Initials:	
Site Location:		

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	11.49	09/18/17	RG	
FINAL PRESSURE (PSIA)	23.84	09/18/17	RG	
Pressurization Gas: <input type="checkbox"/> N2 <input type="checkbox"/> He	SCREENED <input type="checkbox"/>	SCRN DIL. VS 250mLs:		
Initial Canister Dilution Factor =	2.07			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			2.07		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors						
	Date	Instr.	File #			
Canister DF = 2.07	9/22/2017	ATMS9		X	Load DF = 0.4826255	X
					250	
					518	
					Bag DF = 1	=
					BVf (mLs)	FINAL DF
					Bvi (mLs)	1.00137437
Canister DF = 2.07				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	#DIV/0!
					Bvi (mLs)	
Canister DF = 2.07				X	Load DF = #DIV/0!	X
					LVf (mLs)	
					LVi (mLs)	#DIV/0!
					Bag DF = 1	=
					BVf (mLs)	#DIV/0!
					Bvi (mLs)	



Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-31467-1

Login Number: 31467
List Number: 1
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Certification Type TO-15 SCAN
 Date Cleaned/Batch ID 8/3/17 320-30397
 Date of QC 8/7/2017
 Data File Number C:\MSDCM\1\DATA\170807\



320-30397 Chain of Custody

17080713-d
CANISTER ID NUMBERS

<u>34001030 *</u>	<u>34001139</u>	
<u>8459</u>	<u>34001853</u>	
<u>34000684</u>	<u>34001964</u>	
<u>34001669</u>	<u>34000316</u>	
<u>34001072</u>	<u>34000769</u>	
<u>34001095</u>	<u>34000238</u>	
<u>34001595</u>	<u>34001203</u>	
<u>34000901</u>	<u>34001097</u>	

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "Certification Type" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

[Signature]
1st level Reviewed By:

8/8/17
Date:

[Signature]
2nd level Reviewed By:

8/5/17
Date:

Certification Type TO-15 SOAN
 Date Cleaned/Batch ID 8-21-17 320-30915
 Date of QC 8/28/17
 Data File Number C:\MSDCHEM\1\DATA\170828\



320-30915 Chain of Custody

MS6082805.d
CANISTER ID NUMBERS

* 34000944	8324	
34000650	34001089	
34000812	34000229	
8282	8318 8318	SS 8-22-17
34001191	34000683	
34001079	34001118	
34000672	34000928	
34000234	8506	

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "Certification Type" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

[Signature]
 1st level Reviewed By:

8/29/17
 Date:

[Signature]
 2nd level Reviewed By:

8/30/17
 Date:

Certification Type TO-15 SCAN
 Date Cleaned/Batch ID 8-22-17 320-30969
 Date of QC 8/23/2017
 Data File Number C:\MSDCHEM\1\DATA\170823



320-30969 Chain of Custody

MS60823 08.d
CANISTER ID NUMBERS

<u>34000732 *</u>	<u>34001189</u>	
<u>34001651</u>	<u>34001382</u>	
<u>34001671</u>	<u>8325</u>	
<u>8511</u>	<u>34001225</u>	
<u>34000603</u>	<u>34000628</u>	
<u>34000802</u>	<u>34000752</u>	
<u>34001065</u>	<u>34000904</u>	
<u>34000616</u>	<u>34000914</u>	

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "Certification Type" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

[Signature]
1st level Reviewed By:

8/24/17
Date:

[Signature]
2nd level Reviewed By:

8/30/17
Date:

Certification Type TO-15 SCAN
 Date Cleaned/Batch ID 8-28-17 320-31111
 Date of QC 8/28/17
 Data File Number C:\MSDCHEM\1\DATA\170828



320-31111 Chain of Custody

MS6082810.d
CANISTER ID NUMBERS

<u>34000974 *</u>	<u>34000971</u>	
<u>34000627</u>	<u>34000898</u>	
<u>34000932</u>	<u>8326</u>	
<u>34000951</u>	<u>8562</u>	
<u>34001792</u>	<u>34000622</u>	
<u>8522</u>	<u>34001645</u>	
<u>34001967</u>	<u>34001219</u>	
<u>34000867</u>	<u>34001008</u>	

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "Certification Type" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

[Signature]
1st level Reviewed By:

8/29/17
Date:

[Signature]
2nd level Reviewed By:

8/30/17
Date:

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-30397-1
 SDG No.: _____
 Client Sample ID: 34001030 Lab Sample ID: 320-30397-1
 Matrix: Air Lab File ID: 17080713.D
 Analysis Method: TO-15 Date Collected: 08/03/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/07/2017 21:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 178064 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	2.1	J	5.0	0.18
107-02-8	Acrolein	ND		2.0	0.22
107-13-1	Acrylonitrile	ND		2.0	0.19
107-05-1	Allyl chloride	ND		0.80	0.11
71-43-2	Benzene	ND		0.40	0.079
100-44-7	Benzyl chloride	ND		0.80	0.16
75-27-4	Bromodichloromethane	ND		0.30	0.066
75-25-2	Bromoform	ND		0.40	0.070
74-83-9	Bromomethane	ND		0.80	0.34
106-99-0	1,3-Butadiene	ND		0.80	0.15
106-97-8	n-Butane	ND		0.40	0.15
78-93-3	2-Butanone (MEK)	ND		0.80	0.20
75-65-0	tert-Butyl alcohol (TBA)	ND		2.0	0.11
104-51-8	n-Butylbenzene	ND		0.40	0.18
135-98-8	sec-Butylbenzene	ND		0.40	0.070
98-06-6	tert-Butylbenzene	ND		0.80	0.068
75-15-0	Carbon disulfide	ND		0.80	0.078
56-23-5	Carbon tetrachloride	ND		0.80	0.064
108-90-7	Chlorobenzene	ND		0.30	0.064
75-45-6	Chlorodifluoromethane	ND		0.80	0.27
75-00-3	Chloroethane	ND		0.80	0.31
67-66-3	Chloroform	ND		0.30	0.095
74-87-3	Chloromethane	ND		0.80	0.20
95-49-8	2-Chlorotoluene	ND		0.40	0.080
110-82-7	Cyclohexane	ND		0.40	0.084
124-48-1	Dibromochloromethane	ND		0.40	0.079
106-93-4	1,2-Dibromoethane (EDB)	ND		0.80	0.075
74-95-3	Dibromomethane	ND		0.40	0.057
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16
95-50-1	1,2-Dichlorobenzene	ND		0.40	0.13
541-73-1	1,3-Dichlorobenzene	ND		0.40	0.11
106-46-7	1,4-Dichlorobenzene	ND		0.40	0.15
75-71-8	Dichlorodifluoromethane	ND		0.40	0.15
75-34-3	1,1-Dichloroethane	ND		0.30	0.072
107-06-2	1,2-Dichloroethane	ND		0.80	0.088

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-30397-1
 SDG No.: _____
 Client Sample ID: 34001030 Lab Sample ID: 320-30397-1
 Matrix: Air Lab File ID: 17080713.D
 Analysis Method: TO-15 Date Collected: 08/03/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/07/2017 21:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 178064 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		0.80	0.13
156-59-2	cis-1,2-Dichloroethene	ND		0.40	0.089
156-60-5	trans-1,2-Dichloroethene	ND		0.40	0.10
78-87-5	1,2-Dichloropropane	ND		0.40	0.24
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	0.10
10061-02-6	trans-1,3-Dichloropropene	ND		0.40	0.088
123-91-1	1,4-Dioxane	ND		0.80	0.10
141-78-6	Ethyl acetate	ND		0.30	0.18
100-41-4	Ethylbenzene	0.069	J	0.40	0.063
622-96-8	4-Ethyltoluene	ND		0.40	0.19
142-82-5	n-Heptane	ND		0.80	0.063
87-68-3	Hexachlorobutadiene	ND		2.0	0.43
110-54-3	n-Hexane	ND		0.80	0.075
591-78-6	2-Hexanone	ND		0.40	0.087
98-82-8	Isopropylbenzene	ND		0.80	0.10
99-87-6	4-Isopropyltoluene	ND		0.80	0.12
1634-04-4	Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12
80-62-6	Methyl methacrylate	ND		0.80	0.16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14
75-09-2	Methylene Chloride	0.082	J	0.40	0.072
98-83-9	alpha-Methylstyrene	ND		0.40	0.065
91-20-3	Naphthalene	ND		0.80	0.56
111-65-9	n-Octane	ND		0.40	0.055
109-66-0	n-Pentane	ND		0.80	0.26
115-07-1	Propylene	ND		0.40	0.099
103-65-1	N-Propylbenzene	ND		0.40	0.059
100-42-5	Styrene	ND		0.40	0.059
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.40	0.069
127-18-4	Tetrachloroethene	ND		0.40	0.051
109-99-9	Tetrahydrofuran	0.33	J	0.80	0.21
108-88-3	Toluene	0.057	J	0.40	0.051
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.43
71-55-6	1,1,1-Trichloroethane	ND		0.30	0.065
79-00-5	1,1,2-Trichloroethane	ND		0.40	0.067

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-30397-1
 SDG No.: _____
 Client Sample ID: 34001030 Lab Sample ID: 320-30397-1
 Matrix: Air Lab File ID: 17080713.D
 Analysis Method: TO-15 Date Collected: 08/03/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/07/2017 21:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 178064 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	ND		0.40	0.11
75-69-4	Trichlorofluoromethane	ND		0.40	0.20
96-18-4	1,2,3-Trichloropropane	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	ND		0.80	0.16
108-67-8	1,3,5-Trimethylbenzene	ND		0.40	0.13
540-84-1	2,2,4-Trimethylpentane	ND		0.40	0.071
108-05-4	Vinyl acetate	ND		0.80	0.15
593-60-2	Vinyl bromide	ND		0.80	0.26
75-01-4	Vinyl chloride	ND		0.40	0.12
179601-23-1	m,p-Xylene	0.29	J	0.80	0.10
95-47-6	o-Xylene	0.072	J	0.40	0.054

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-130
2037-26-5	Toluene-d8 (Surr)	93		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\ATMS11\20170807-46366.b\17080713.D
 Lims ID: 320-30397-A-1
 Client ID: 34001030
 Sample Type: Client
 Inject. Date: 07-Aug-2017 21:13:30 ALS Bottle#: 6 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 320-30397-A-1
 Misc. Info.: 500 mL CAN CERT
 Operator ID: LHS Instrument ID: ATMS11
 Method: \\ChromNA\Sacramento\ChromData\ATMS11\20170807-46366.b\TO15_ATMS11.m
 Limit Group: MSA - TO15 - ICAL
 Last Update: 08-Aug-2017 13:54:17 Calib Date: 12-Jul-2017 08:14:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Sacramento\ChromData\ATMS11\20170711-45314.b\17071124.D
 Column 1 : RTX Volatiles (0.32 mm) Det: MS SCAN
 Process Host: XAWRK018

First Level Reviewer: phanthasena

Date:

08-Aug-2017 13:53:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	12.190	12.180	0.010	96	39533	4.00	
* 2 1,4-Difluorobenzene	114	14.282	14.275	0.007	95	151725	4.00	
* 3 Chlorobenzene-d5 (IS)	117	20.226	20.225	0.001	87	128663	4.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	13.361	13.348	0.013	98	53786	4.06	
\$ 5 Toluene-d8 (Surr)	100	17.457	17.450	0.007	45	88116	3.72	
\$ 6 4-Bromofluorobenzene (Surr	174	22.160	22.156	0.004	95	72384	3.79	
14 Propene	41	4.152	4.138	0.014	1	712	0.0663	
22 Butane	43	4.870	4.844	0.026	34	2321	0.1073	
31 Acetone	43	7.517	7.438	0.079	100	22289	2.07	
47 Methylene Chloride	49	8.758	8.744	0.014	20	1129	0.0823	
54 2-Butanone (MEK)	72	11.209	11.136	0.073	50	333	0.0996	
62 Tetrahydrofuran	42	12.396	12.336	0.060	77	3753	0.3341	
85 Toluene	91	17.608	17.606	0.002	15	1578	0.0574	
97 Ethylbenzene	91	20.421	20.420	0.001	1	2175	0.0689	
98 m-Xylene & p-Xylene	91	20.562	20.561	0.001	72	6897	0.2885	
101 o-Xylene	91	21.255	21.260	-0.005	1	1731	0.0721	
110 4-Ethyltoluene	120	22.606	22.604	0.002	1	325	0.0307	
115 1,2,4-Trimethylbenzene	120	23.225	23.223	0.002	76	865	0.0659	

Reagents:

VAMIS20_00028 Amount Added: 50.00 Units: mL Run Reagent

Data File: \\ChromNA\Sacramento\ChromData\ATMS11\20170807-46366.b\17080713.D

Injection Date: 07-Aug-2017 21:13:30

Instrument ID: ATMS11

Operator ID: LHS

Lims ID: 320-30397-A-1

Lab Sample ID: 320-30397-1

Worklist Smp#: 13

Client ID: 34001030

Purge Vol: 500.000 mL

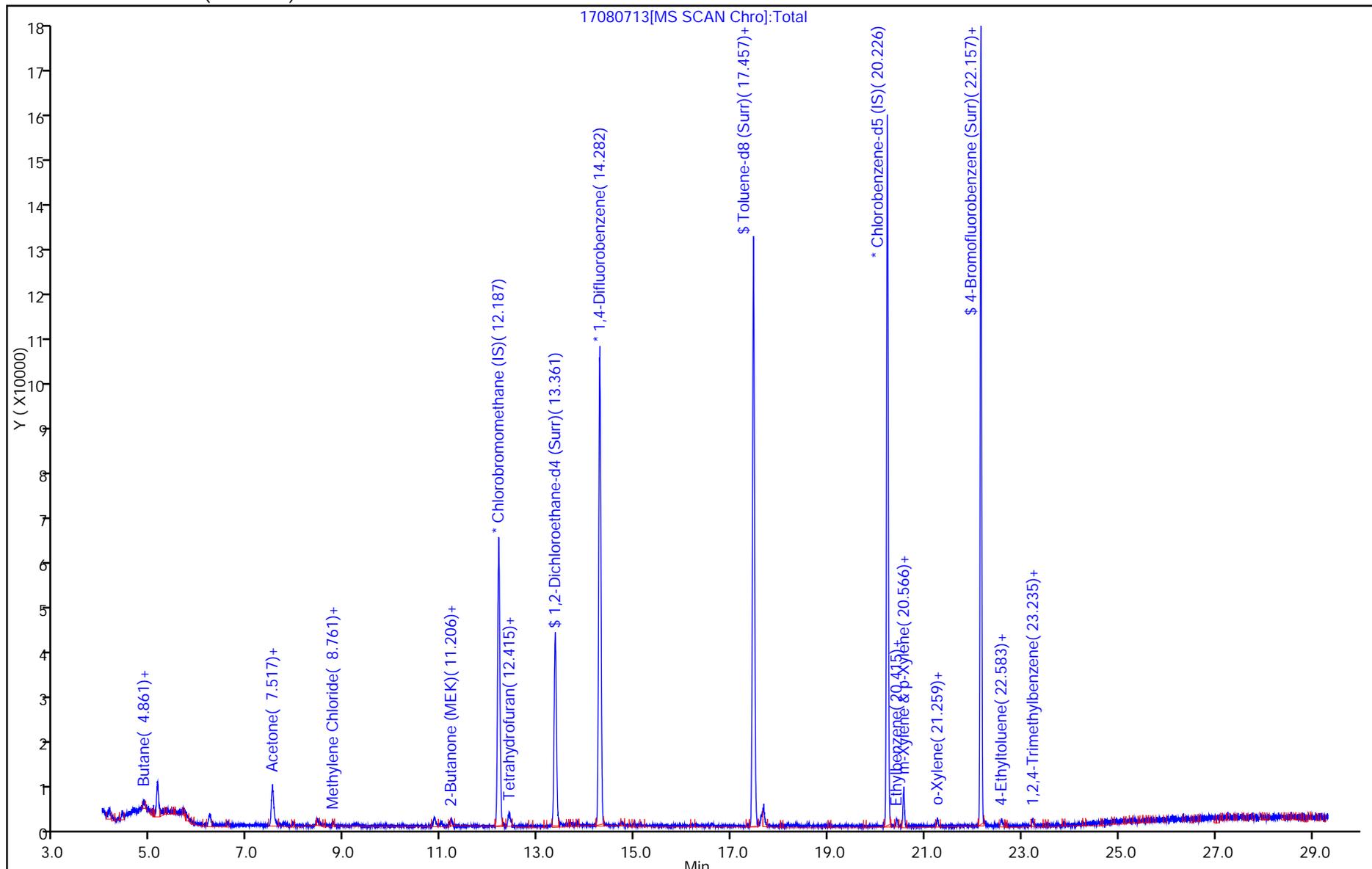
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: TO15_ATMS11

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS11\20170807-46366.b\17080713.D

Injection Date: 07-Aug-2017 21:13:30

Instrument ID: ATMS11

Lims ID: 320-30397-A-1

Lab Sample ID: 320-30397-1

Client ID: 34001030

Operator ID: LHS

ALS Bottle#: 6

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

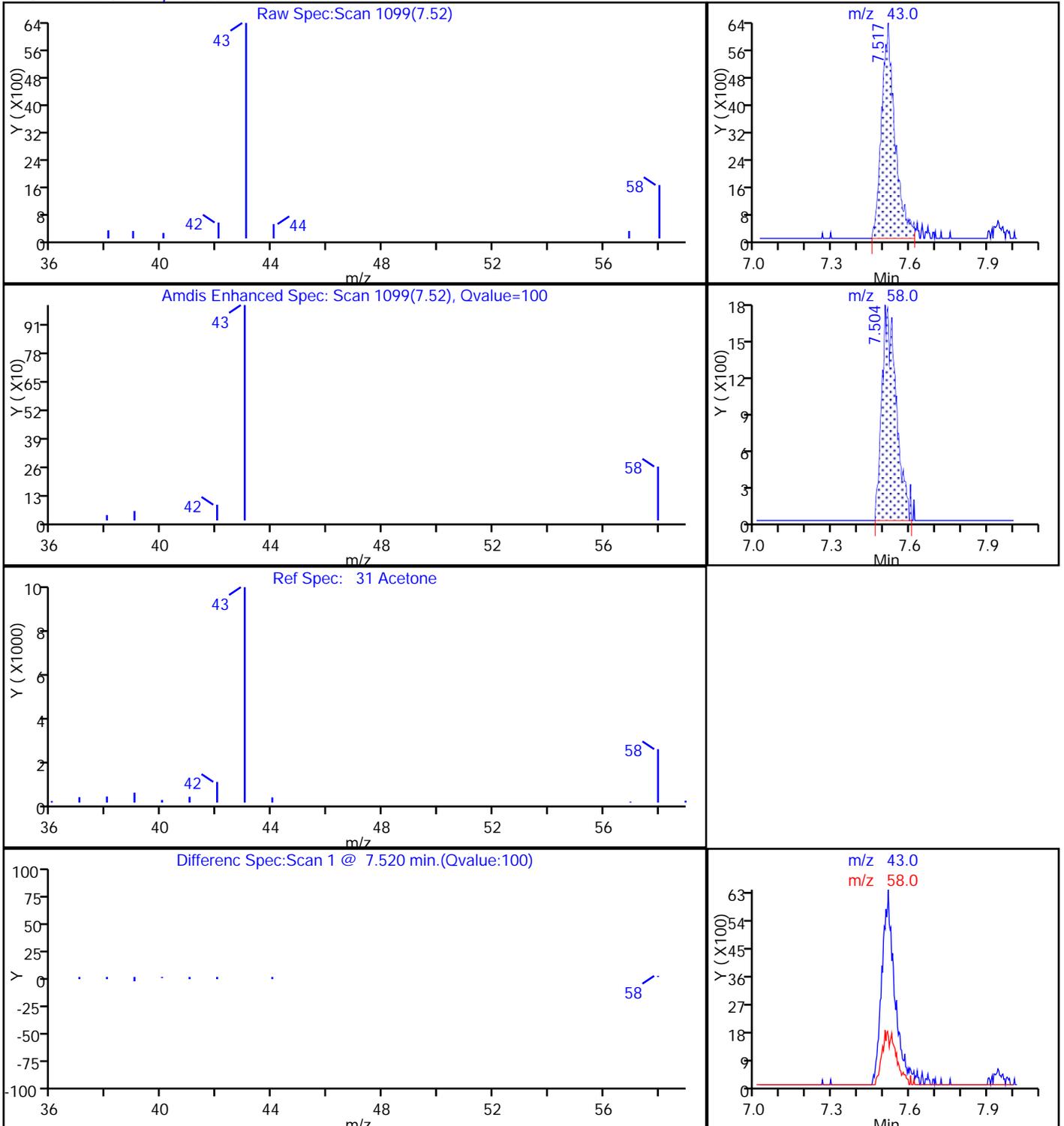
Method: TO15_ATMS11

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

31 Acetone, CAS: 67-64-1



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS11\20170807-46366.b\17080713.D

Injection Date: 07-Aug-2017 21:13:30

Instrument ID: ATMS11

Lims ID: 320-30397-A-1

Lab Sample ID: 320-30397-1

Client ID: 34001030

Operator ID: LHS

ALS Bottle#: 6 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

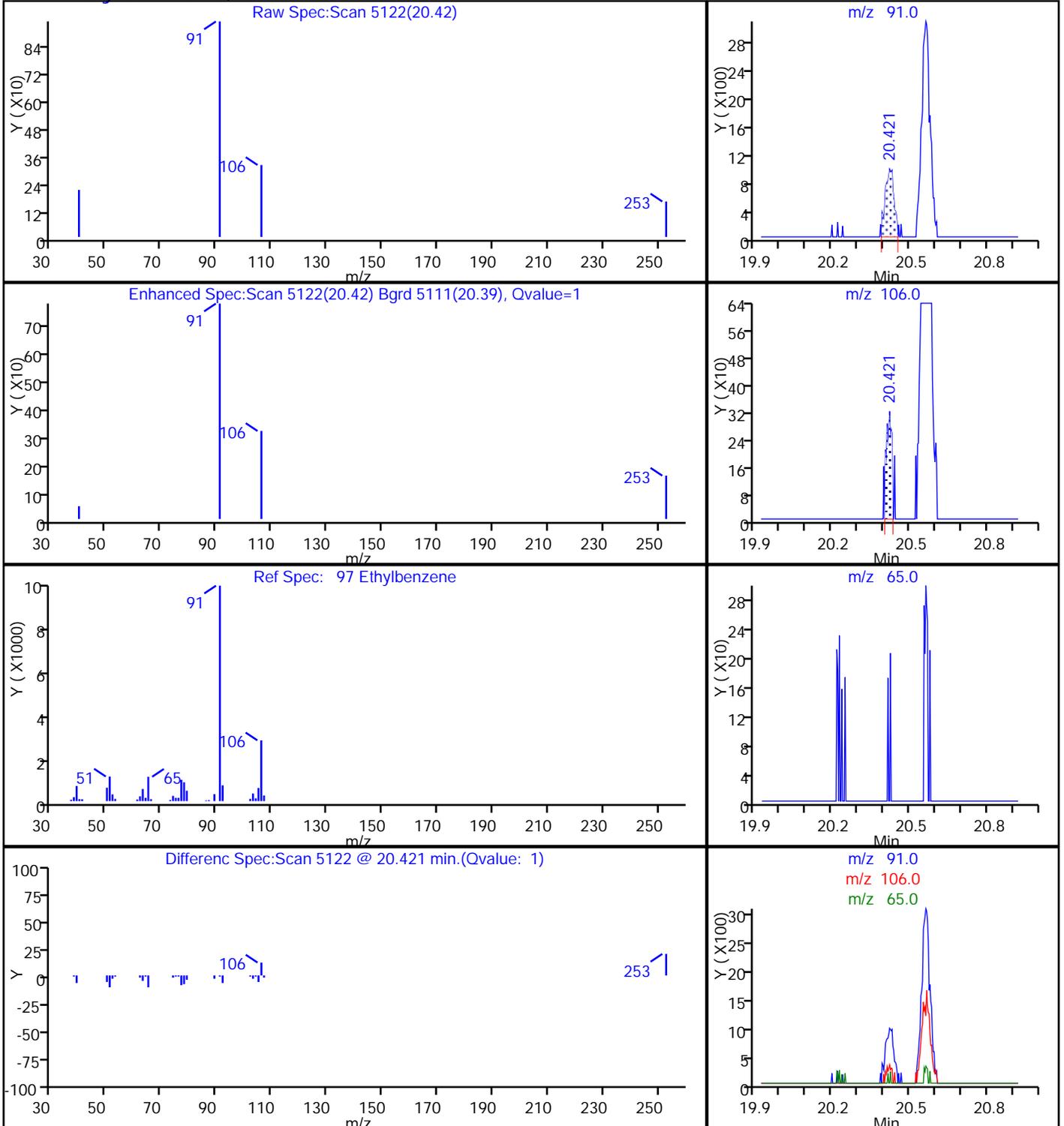
Method: TO15_ATMS11

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

97 Ethylbenzene, CAS: 100-41-4



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS11\20170807-46366.b\17080713.D

Injection Date: 07-Aug-2017 21:13:30

Instrument ID: ATMS11

Lims ID: 320-30397-A-1

Lab Sample ID: 320-30397-1

Client ID: 34001030

Operator ID: LHS

ALS Bottle#: 6 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

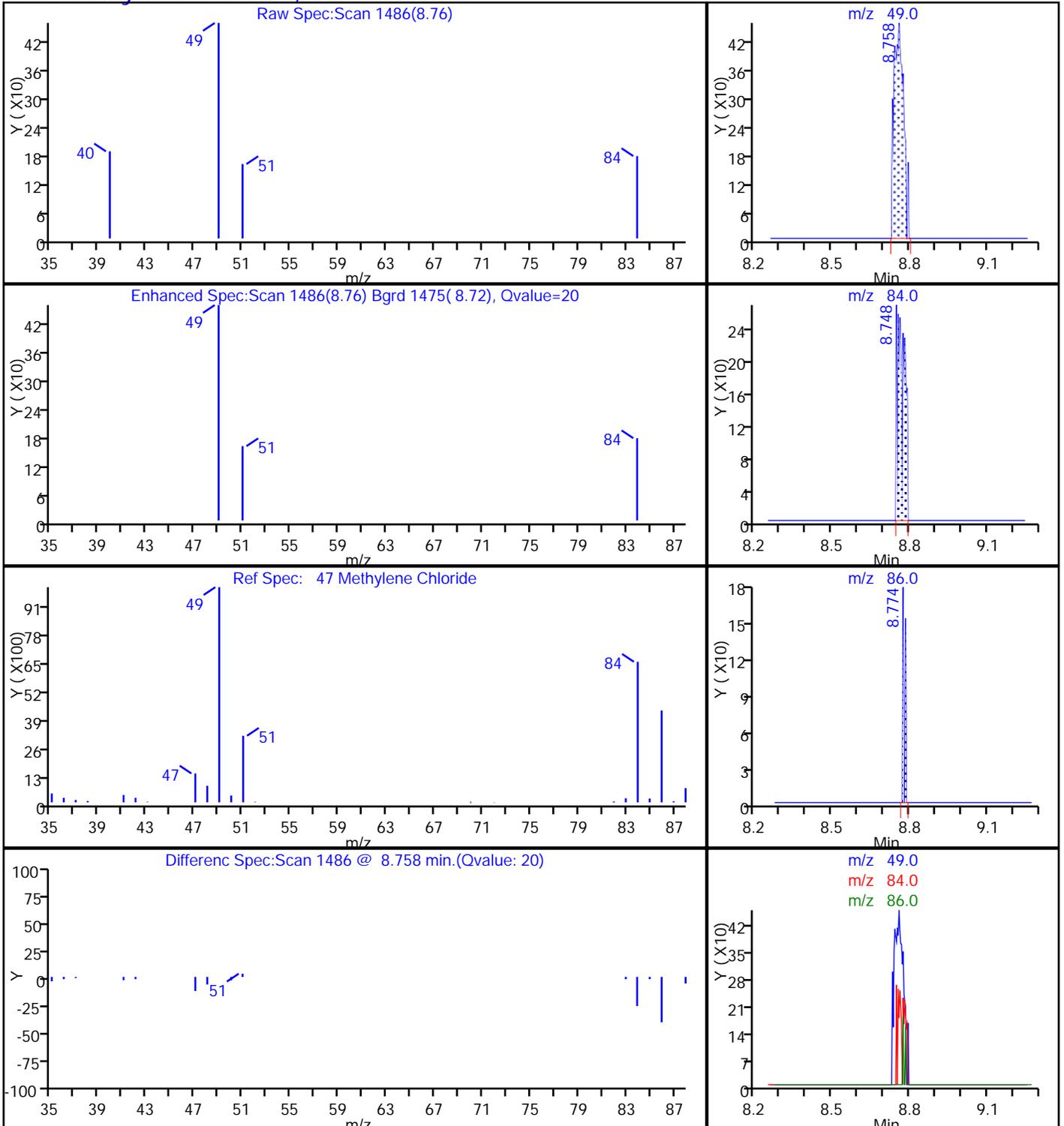
Method: TO15_ATMS11

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

47 Methylene Chloride, CAS: 75-09-2



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS11\20170807-46366.b\17080713.D

Injection Date: 07-Aug-2017 21:13:30

Instrument ID: ATMS11

Lims ID: 320-30397-A-1

Lab Sample ID: 320-30397-1

Client ID: 34001030

Operator ID: LHS

ALS Bottle#: 6 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

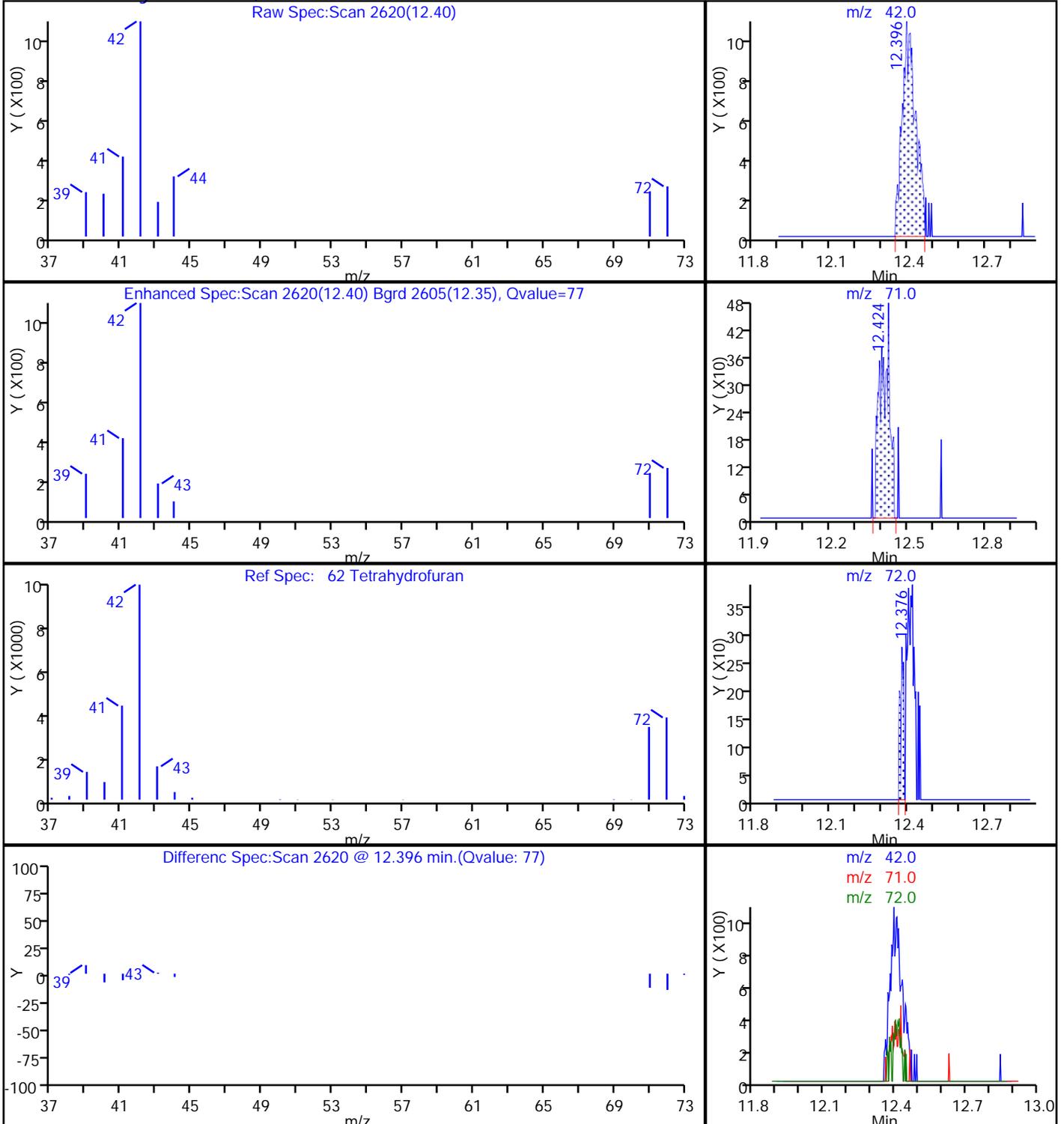
Method: TO15_ATMS11

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

62 Tetrahydrofuran, CAS: 109-99-9



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS11\20170807-46366.b\17080713.D

Injection Date: 07-Aug-2017 21:13:30

Instrument ID: ATMS11

Lims ID: 320-30397-A-1

Lab Sample ID: 320-30397-1

Client ID: 34001030

Operator ID: LHS

ALS Bottle#: 6

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

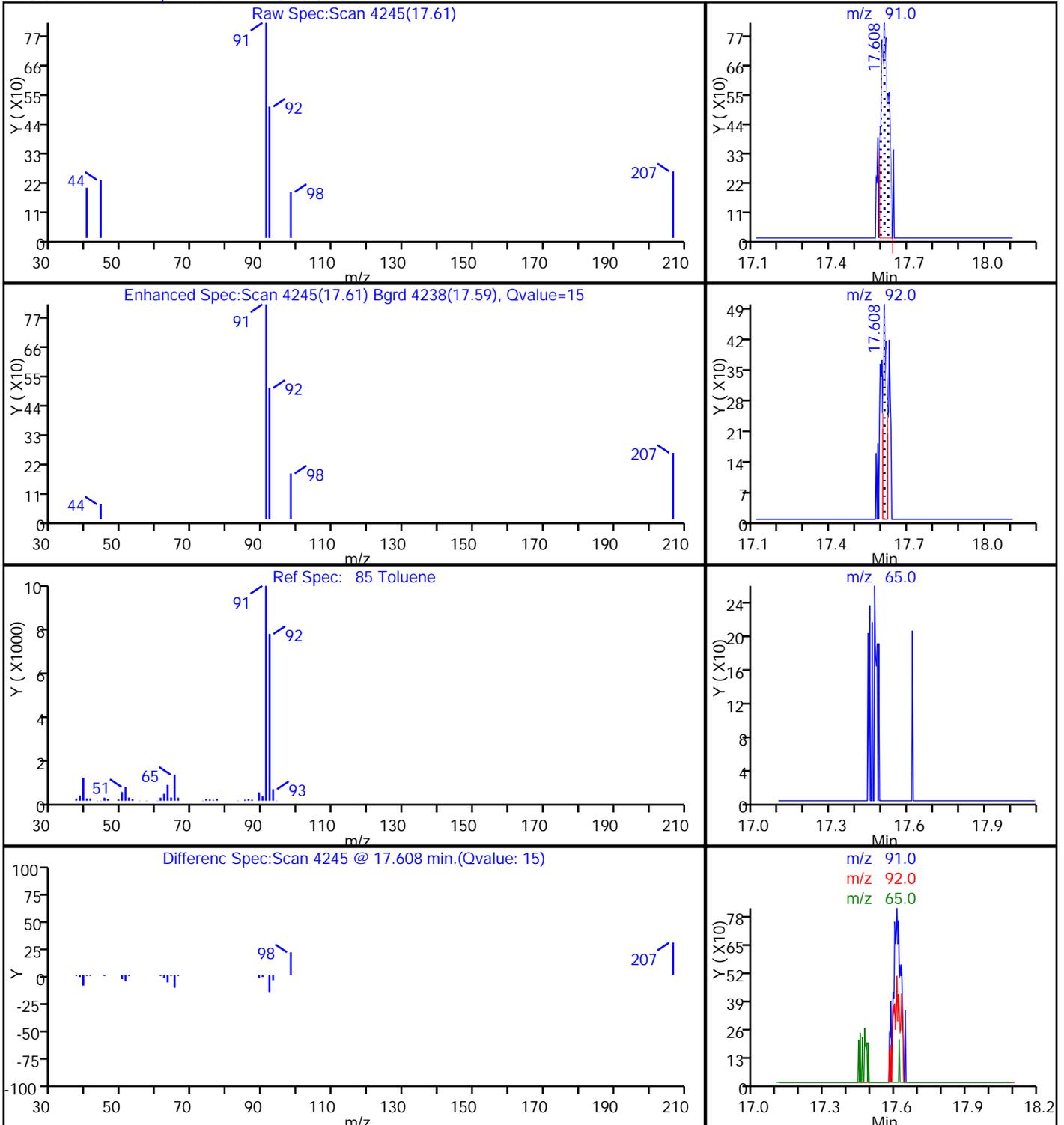
Method: TO15_ATMS11

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

85 Toluene, CAS: 108-88-3



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS11\20170807-46366.b\17080713.D

Injection Date: 07-Aug-2017 21:13:30

Instrument ID: ATMS11

Lims ID: 320-30397-A-1

Lab Sample ID: 320-30397-1

Client ID: 34001030

Operator ID: LHS

ALS Bottle#: 6

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

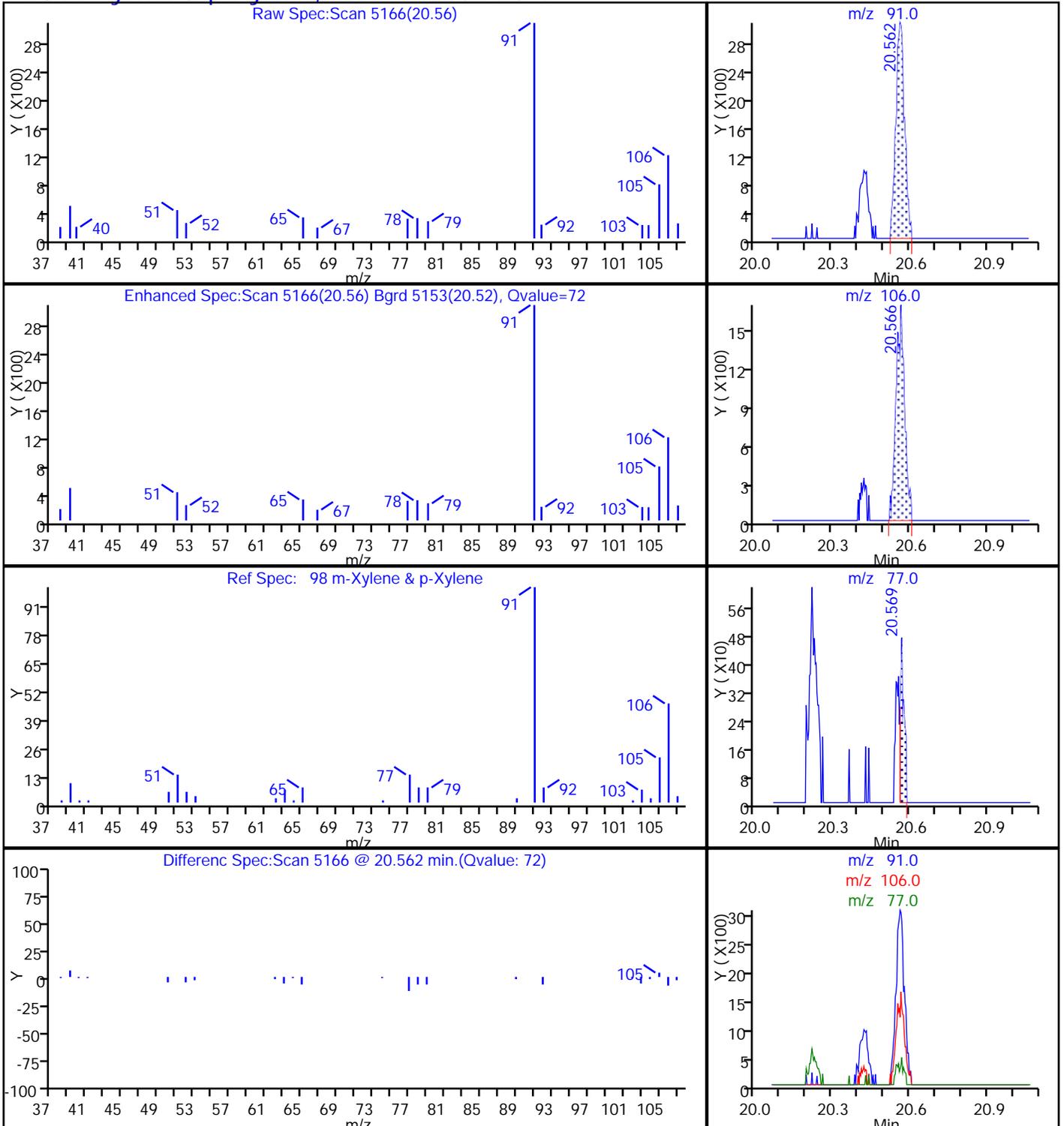
Method: TO15_ATMS11

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

98 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS11\20170807-46366.b\17080713.D

Injection Date: 07-Aug-2017 21:13:30

Instrument ID: ATMS11

Lims ID: 320-30397-A-1

Lab Sample ID: 320-30397-1

Client ID: 34001030

Operator ID: LHS

ALS Bottle#: 6

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

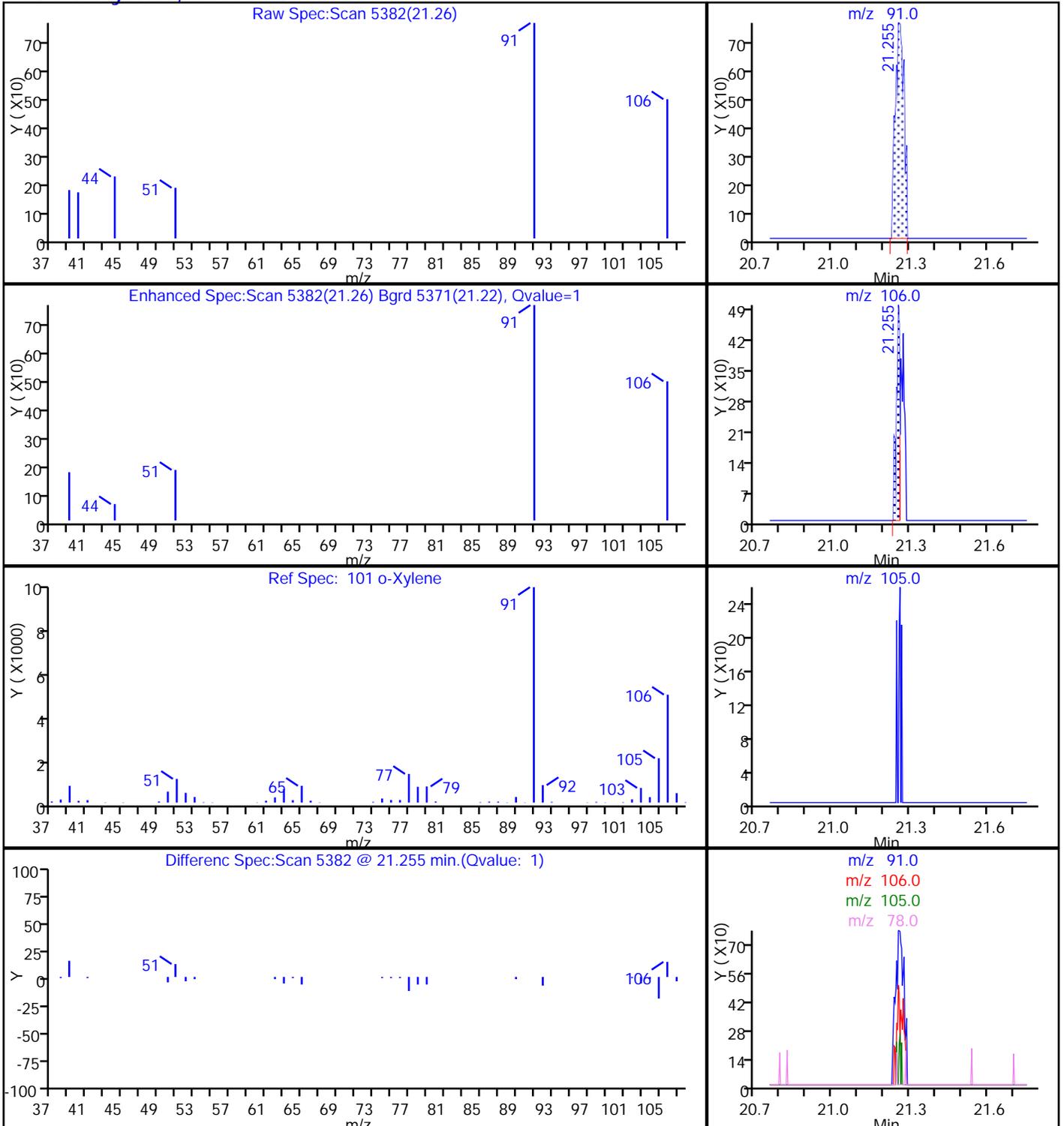
Method: TO15_ATMS11

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

101 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-30915-1
 SDG No.: _____
 Client Sample ID: 34000944 Lab Sample ID: 320-30915-1
 Matrix: Air Lab File ID: MS6082805.D
 Analysis Method: TO-15 Date Collected: 08/21/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/28/2017 15:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 181551 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	0.92	J	5.0	0.18
107-02-8	Acrolein	ND		2.0	0.22
107-13-1	Acrylonitrile	ND		2.0	0.19
107-05-1	Allyl chloride	ND		0.80	0.11
71-43-2	Benzene	ND		0.40	0.079
100-44-7	Benzyl chloride	ND		0.80	0.16
75-27-4	Bromodichloromethane	ND		0.30	0.066
75-25-2	Bromoform	ND		0.40	0.070
74-83-9	Bromomethane	ND		0.80	0.34
106-99-0	1,3-Butadiene	ND		0.80	0.15
106-97-8	n-Butane	ND		0.40	0.15
78-93-3	2-Butanone (MEK)	ND		0.80	0.20
75-65-0	tert-Butyl alcohol (TBA)	ND		2.0	0.11
104-51-8	n-Butylbenzene	ND		0.40	0.18
135-98-8	sec-Butylbenzene	ND		0.40	0.070
98-06-6	tert-Butylbenzene	ND		0.80	0.068
75-15-0	Carbon disulfide	ND		0.80	0.078
56-23-5	Carbon tetrachloride	ND		0.80	0.064
108-90-7	Chlorobenzene	ND		0.30	0.064
75-45-6	Chlorodifluoromethane	ND		0.80	0.27
75-00-3	Chloroethane	ND		0.80	0.31
67-66-3	Chloroform	ND		0.30	0.095
74-87-3	Chloromethane	ND		0.80	0.20
95-49-8	2-Chlorotoluene	ND		0.40	0.080
110-82-7	Cyclohexane	ND		0.40	0.084
124-48-1	Dibromochloromethane	ND		0.40	0.079
106-93-4	1,2-Dibromoethane (EDB)	ND		0.80	0.075
74-95-3	Dibromomethane	ND		0.40	0.057
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16
95-50-1	1,2-Dichlorobenzene	ND		0.40	0.13
541-73-1	1,3-Dichlorobenzene	ND		0.40	0.11
106-46-7	1,4-Dichlorobenzene	ND		0.40	0.15
75-71-8	Dichlorodifluoromethane	ND		0.40	0.15
75-34-3	1,1-Dichloroethane	ND		0.30	0.072
107-06-2	1,2-Dichloroethane	ND		0.80	0.088

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-30915-1
 SDG No.: _____
 Client Sample ID: 34000944 Lab Sample ID: 320-30915-1
 Matrix: Air Lab File ID: MS6082805.D
 Analysis Method: TO-15 Date Collected: 08/21/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/28/2017 15:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 181551 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		0.80	0.13
156-59-2	cis-1,2-Dichloroethene	ND		0.40	0.089
156-60-5	trans-1,2-Dichloroethene	ND		0.40	0.10
78-87-5	1,2-Dichloropropane	ND		0.40	0.24
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	0.10
10061-02-6	trans-1,3-Dichloropropene	ND		0.40	0.088
123-91-1	1,4-Dioxane	ND		0.80	0.10
141-78-6	Ethyl acetate	ND		0.30	0.18
100-41-4	Ethylbenzene	ND		0.40	0.063
622-96-8	4-Ethyltoluene	ND		0.40	0.19
142-82-5	n-Heptane	ND		0.80	0.063
87-68-3	Hexachlorobutadiene	ND		2.0	0.43
110-54-3	n-Hexane	ND		0.80	0.075
591-78-6	2-Hexanone	ND		0.40	0.087
98-82-8	Isopropylbenzene	ND		0.80	0.10
99-87-6	4-Isopropyltoluene	ND		0.80	0.12
1634-04-4	Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12
80-62-6	Methyl methacrylate	ND		0.80	0.16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14
75-09-2	Methylene Chloride	ND		0.40	0.072
98-83-9	alpha-Methylstyrene	ND		0.40	0.065
91-20-3	Naphthalene	ND		0.80	0.56
111-65-9	n-Octane	ND		0.40	0.055
109-66-0	n-Pentane	ND		0.80	0.26
115-07-1	Propylene	0.10	J	0.40	0.099
103-65-1	N-Propylbenzene	ND		0.40	0.059
100-42-5	Styrene	ND		0.40	0.059
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.40	0.069
127-18-4	Tetrachloroethene	ND		0.40	0.051
109-99-9	Tetrahydrofuran	ND		0.80	0.21
108-88-3	Toluene	ND		0.40	0.051
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.43
71-55-6	1,1,1-Trichloroethane	ND		0.30	0.065
79-00-5	1,1,2-Trichloroethane	ND		0.40	0.067

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-30915-1
 SDG No.: _____
 Client Sample ID: 34000944 Lab Sample ID: 320-30915-1
 Matrix: Air Lab File ID: MS6082805.D
 Analysis Method: TO-15 Date Collected: 08/21/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/28/2017 15:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 181551 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	ND		0.40	0.11
75-69-4	Trichlorofluoromethane	ND		0.40	0.20
96-18-4	1,2,3-Trichloropropane	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	ND		0.80	0.16
108-67-8	1,3,5-Trimethylbenzene	ND		0.40	0.13
540-84-1	2,2,4-Trimethylpentane	ND		0.40	0.071
108-05-4	Vinyl acetate	ND		0.80	0.15
593-60-2	Vinyl bromide	ND		0.80	0.26
75-01-4	Vinyl chloride	ND		0.40	0.12
179601-23-1	m,p-Xylene	ND		0.80	0.10
95-47-6	o-Xylene	ND		0.40	0.054

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		70-130
2037-26-5	Toluene-d8 (Surr)	98		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082805.D
 Lims ID: 320-30915-A-1
 Client ID: 34000944
 Sample Type: Client
 Inject. Date: 28-Aug-2017 15:38:30 ALS Bottle#: 3 Worklist Smp#: 5
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 320-30915-A-1
 Misc. Info.: 500 mL CAN CERT
 Operator ID: LHS Instrument ID: ATMS6
 Method: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\TO15_ATMS6.m
 Limit Group: MSA - TO15 - ICAL
 Last Update: 29-Aug-2017 11:19:43 Calib Date: 01-Aug-2017 02:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Sacramento\ChromData\ATMS6\20170801-46103.b\MS6073112.D
 Column 1 : RTX Volatiles (0.32 mm) Det: MS SCAN
 Process Host: XAWRK016

First Level Reviewer: phanthasena Date: 29-Aug-2017 11:19:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	13.283	13.295	-0.012	97	38738	4.00	
* 2 1,4-Difluorobenzene	114	15.413	15.431	-0.018	95	140276	4.00	
* 3 Chlorobenzene-d5 (IS)	117	22.153	22.153	0.000	88	121960	4.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	14.482	14.494	-0.012	35	54334	4.53	
\$ 5 Toluene-d8 (Surr)	100	18.874	18.874	0.000	99	87726	3.90	
\$ 6 4-Bromofluorobenzene (Surr	95	24.714	24.714	0.000	92	72492	3.72	
11 Propene	41	4.627	4.614	0.013	95	914	0.1003	
32 Acetone	43	8.374	8.307	0.067	95	16707	0.9233	

Reagents:

VAMIS20_00030 Amount Added: 50.00 Units: mL Run Reagent

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082805.D

Injection Date: 28-Aug-2017 15:38:30

Instrument ID: ATMS6

Operator ID: LHS

Lims ID: 320-30915-A-1

Lab Sample ID: 320-30915-1

Worklist Smp#: 5

Client ID: 34000944

Purge Vol: 25.000 mL

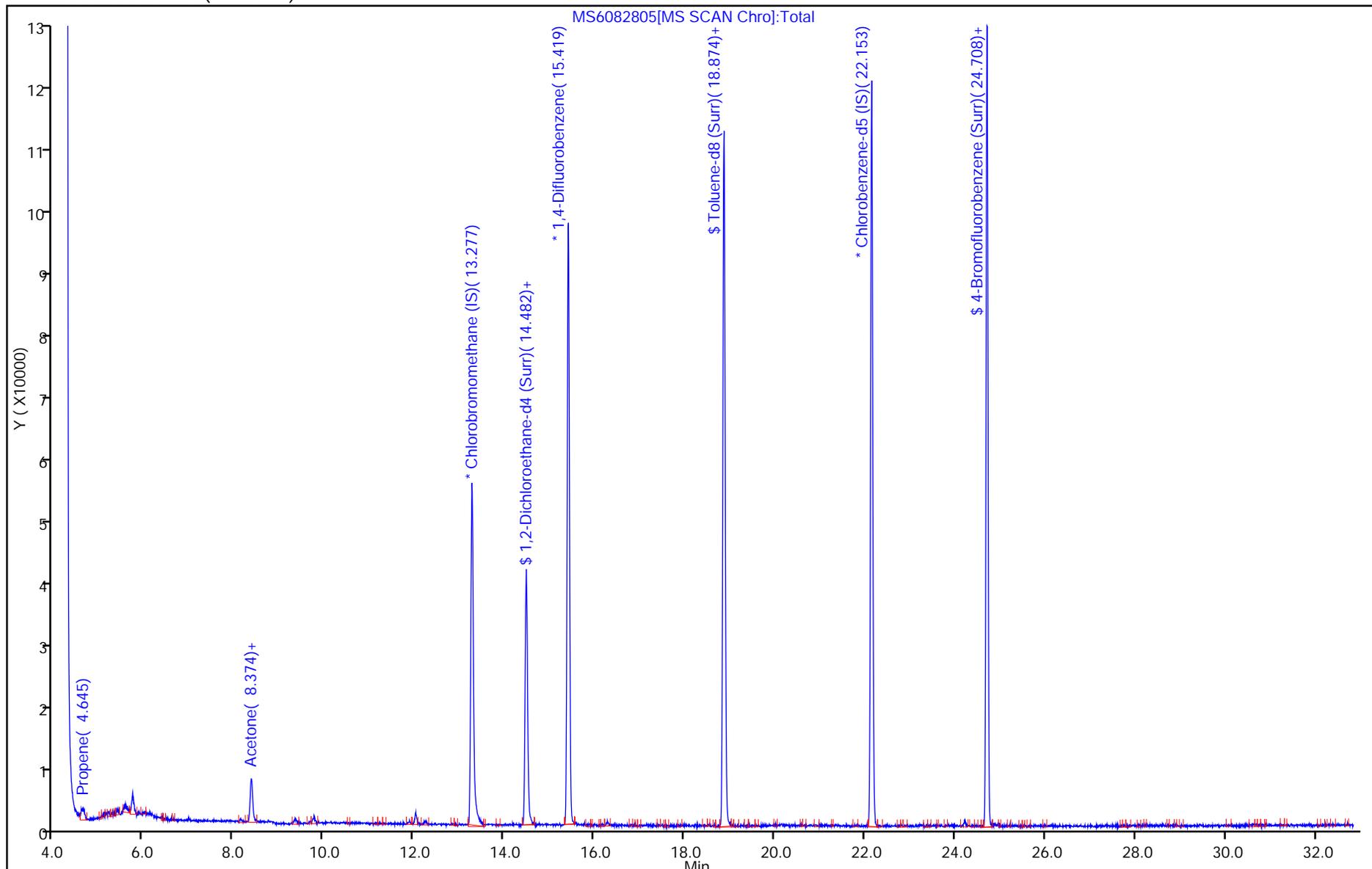
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082805.D

Injection Date: 28-Aug-2017 15:38:30

Instrument ID: ATMS6

Lims ID: 320-30915-A-1

Lab Sample ID: 320-30915-1

Client ID: 34000944

Operator ID: LHS

ALS Bottle#: 3

Worklist Smp#: 5

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

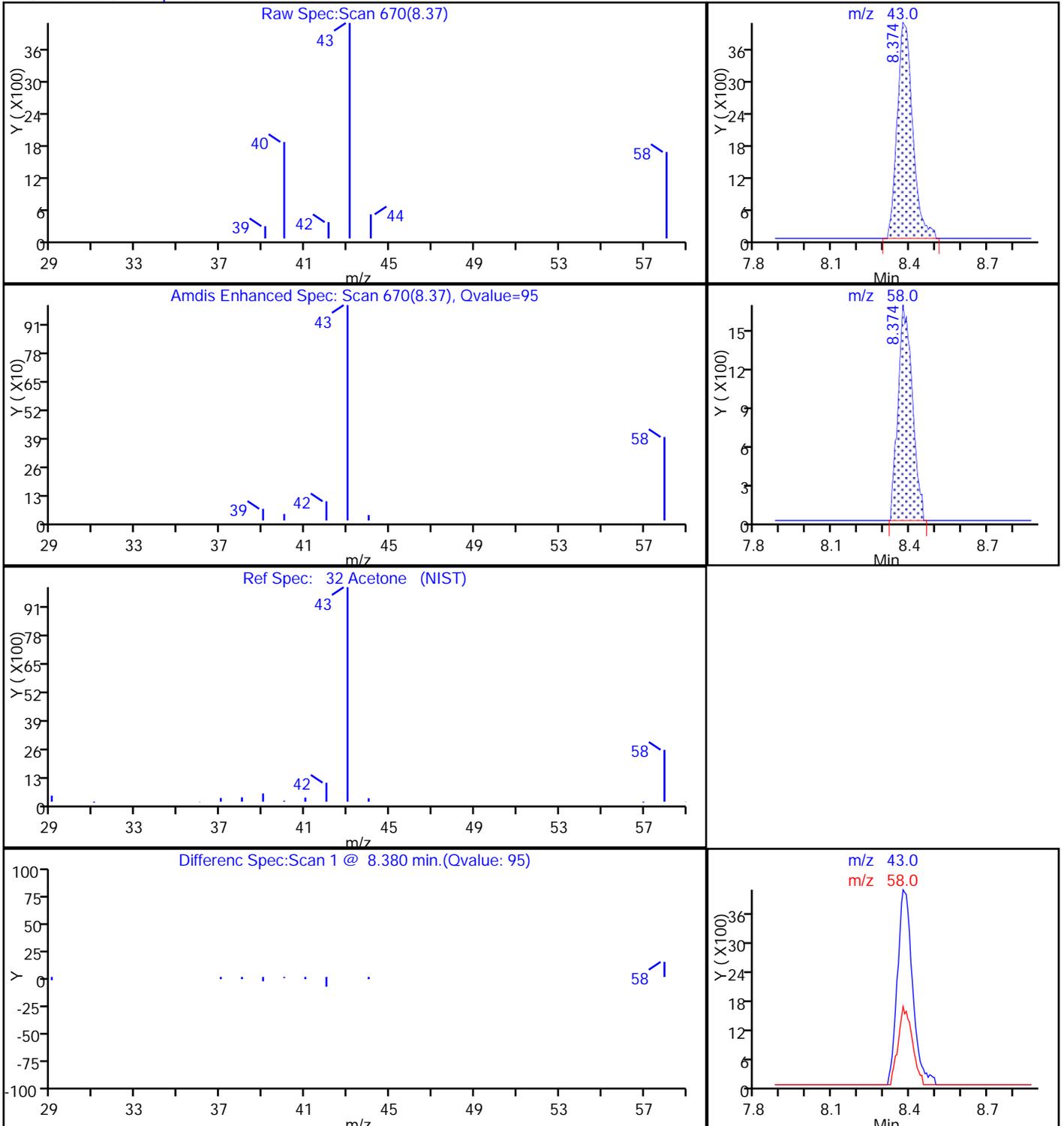
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

32 Acetone, CAS: 67-64-1



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082805.D

Injection Date: 28-Aug-2017 15:38:30

Instrument ID: ATMS6

Lims ID: 320-30915-A-1

Lab Sample ID: 320-30915-1

Client ID: 34000944

Operator ID: LHS

ALS Bottle#: 3 Worklist Smp#: 5

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

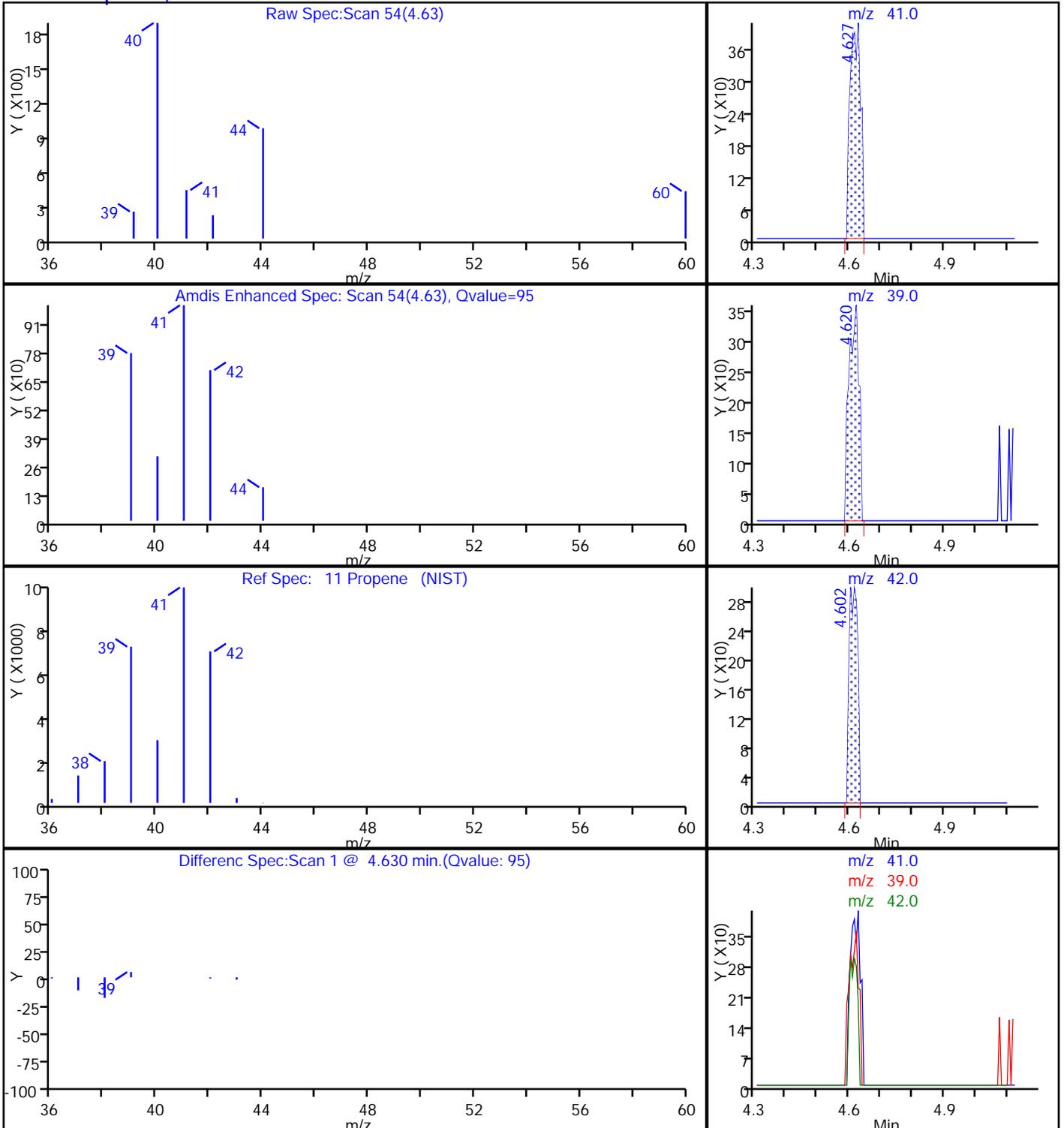
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

11 Propene, CAS: 115-07-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-30969-1
 SDG No.: _____
 Client Sample ID: 34000732 Lab Sample ID: 320-30969-1
 Matrix: Air Lab File ID: MS6082308.D
 Analysis Method: TO-15 Date Collected: 08/22/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/23/2017 17:53
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 180765 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	0.48	J	5.0	0.18
107-02-8	Acrolein	ND		2.0	0.22
107-13-1	Acrylonitrile	ND		2.0	0.19
107-05-1	Allyl chloride	ND		0.80	0.11
71-43-2	Benzene	ND		0.40	0.079
100-44-7	Benzyl chloride	ND		0.80	0.16
75-27-4	Bromodichloromethane	ND		0.30	0.066
75-25-2	Bromoform	ND		0.40	0.070
74-83-9	Bromomethane	ND		0.80	0.34
106-99-0	1,3-Butadiene	ND		0.80	0.15
106-97-8	n-Butane	ND		0.40	0.15
78-93-3	2-Butanone (MEK)	ND		0.80	0.20
75-65-0	tert-Butyl alcohol (TBA)	ND		2.0	0.11
104-51-8	n-Butylbenzene	ND		0.40	0.18
135-98-8	sec-Butylbenzene	ND		0.40	0.070
98-06-6	tert-Butylbenzene	ND		0.80	0.068
75-15-0	Carbon disulfide	0.24	J	0.80	0.078
56-23-5	Carbon tetrachloride	ND		0.80	0.064
108-90-7	Chlorobenzene	ND		0.30	0.064
75-45-6	Chlorodifluoromethane	ND		0.80	0.27
75-00-3	Chloroethane	ND		0.80	0.31
67-66-3	Chloroform	ND		0.30	0.095
74-87-3	Chloromethane	ND		0.80	0.20
95-49-8	2-Chlorotoluene	ND		0.40	0.080
110-82-7	Cyclohexane	ND		0.40	0.084
124-48-1	Dibromochloromethane	ND		0.40	0.079
106-93-4	1,2-Dibromoethane (EDB)	ND		0.80	0.075
74-95-3	Dibromomethane	ND		0.40	0.057
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16
95-50-1	1,2-Dichlorobenzene	ND		0.40	0.13
541-73-1	1,3-Dichlorobenzene	ND		0.40	0.11
106-46-7	1,4-Dichlorobenzene	ND		0.40	0.15
75-71-8	Dichlorodifluoromethane	ND		0.40	0.15
75-34-3	1,1-Dichloroethane	ND		0.30	0.072
107-06-2	1,2-Dichloroethane	ND		0.80	0.088

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-30969-1
 SDG No.: _____
 Client Sample ID: 34000732 Lab Sample ID: 320-30969-1
 Matrix: Air Lab File ID: MS6082308.D
 Analysis Method: TO-15 Date Collected: 08/22/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/23/2017 17:53
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 180765 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		0.80	0.13
156-59-2	cis-1,2-Dichloroethene	ND		0.40	0.089
156-60-5	trans-1,2-Dichloroethene	ND		0.40	0.10
78-87-5	1,2-Dichloropropane	ND		0.40	0.24
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	0.10
10061-02-6	trans-1,3-Dichloropropene	ND		0.40	0.088
123-91-1	1,4-Dioxane	ND		0.80	0.10
141-78-6	Ethyl acetate	ND		0.30	0.18
100-41-4	Ethylbenzene	ND		0.40	0.063
622-96-8	4-Ethyltoluene	ND		0.40	0.19
142-82-5	n-Heptane	ND		0.80	0.063
87-68-3	Hexachlorobutadiene	ND		2.0	0.43
110-54-3	n-Hexane	ND		0.80	0.075
591-78-6	2-Hexanone	ND		0.40	0.087
98-82-8	Isopropylbenzene	ND		0.80	0.10
99-87-6	4-Isopropyltoluene	ND		0.80	0.12
1634-04-4	Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12
80-62-6	Methyl methacrylate	ND		0.80	0.16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14
75-09-2	Methylene Chloride	0.40		0.40	0.072
98-83-9	alpha-Methylstyrene	ND		0.40	0.065
91-20-3	Naphthalene	ND		0.80	0.56
111-65-9	n-Octane	ND		0.40	0.055
109-66-0	n-Pentane	ND		0.80	0.26
115-07-1	Propylene	0.17	J	0.40	0.099
103-65-1	N-Propylbenzene	ND		0.40	0.059
100-42-5	Styrene	ND		0.40	0.059
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.40	0.069
127-18-4	Tetrachloroethene	ND		0.40	0.051
109-99-9	Tetrahydrofuran	ND		0.80	0.21
108-88-3	Toluene	ND		0.40	0.051
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.43
71-55-6	1,1,1-Trichloroethane	ND		0.30	0.065
79-00-5	1,1,2-Trichloroethane	ND		0.40	0.067

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-30969-1
 SDG No.: _____
 Client Sample ID: 34000732 Lab Sample ID: 320-30969-1
 Matrix: Air Lab File ID: MS6082308.D
 Analysis Method: TO-15 Date Collected: 08/22/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/23/2017 17:53
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 180765 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	ND		0.40	0.11
75-69-4	Trichlorofluoromethane	ND		0.40	0.20
96-18-4	1,2,3-Trichloropropane	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	ND		0.80	0.16
108-67-8	1,3,5-Trimethylbenzene	ND		0.40	0.13
540-84-1	2,2,4-Trimethylpentane	ND		0.40	0.071
108-05-4	Vinyl acetate	ND		0.80	0.15
593-60-2	Vinyl bromide	ND		0.80	0.26
75-01-4	Vinyl chloride	ND		0.40	0.12
179601-23-1	m,p-Xylene	ND		0.80	0.10
95-47-6	o-Xylene	ND		0.40	0.054

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		70-130
2037-26-5	Toluene-d8 (Surr)	97		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170823-47007.b\MS6082308.D
 Lims ID: 320-30969-A-1
 Client ID: 34000732
 Sample Type: Client
 Inject. Date: 23-Aug-2017 17:53:30 ALS Bottle#: 6 Worklist Smp#: 7
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 320-30969-A-1
 Misc. Info.: 500 mL CAN CERT
 Operator ID: LHS Instrument ID: ATMS6
 Method: \\ChromNA\Sacramento\ChromData\ATMS6\20170823-47007.b\TO15_ATMS6.m
 Limit Group: MSA - TO15 - ICAL
 Last Update: 24-Aug-2017 07:35:38 Calib Date: 01-Aug-2017 02:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Sacramento\ChromData\ATMS6\20170801-46103.b\MS6073112.D
 Column 1 : RTX Volatiles (0.32 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: phanthasena

Date: 24-Aug-2017 10:18:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	13.277	13.283	-0.006	98	37175	4.00	
* 2 1,4-Difluorobenzene	114	15.412	15.418	-0.006	95	136562	4.00	
* 3 Chlorobenzene-d5 (IS)	117	22.147	22.147	0.000	88	116856	4.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	14.482	14.482	0.000	35	52354	4.49	
\$ 5 Toluene-d8 (Surr)	100	18.868	18.868	0.000	99	85262	3.90	
\$ 6 4-Bromofluorobenzene (Surr	95	24.708	24.708	0.000	92	64557	3.46	
11 Propene	41	4.602	4.590	0.012	88	1505	0.1720	
16 Chloromethane	50	5.204	5.174	0.030	35	1371	0.1456	
32 Acetone	43	8.368	8.289	0.080	92	8251	0.4751	
39 Methylene Chloride	49	9.676	9.676	0.000	96	5210	0.3956	
40 Carbon disulfide	76	9.755	9.755	0.000	95	7161	0.2415	

Reagents:

VAMSIS20_00030

Amount Added: 50.00

Units: mL

Run Reagent

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170823-47007.b\MS6082308.D

Injection Date: 23-Aug-2017 17:53:30

Instrument ID: ATMS6

Operator ID: LHS

Lims ID: 320-30969-A-1

Lab Sample ID: 320-30969-1

Worklist Smp#: 7

Client ID: 34000732

Purge Vol: 25.000 mL

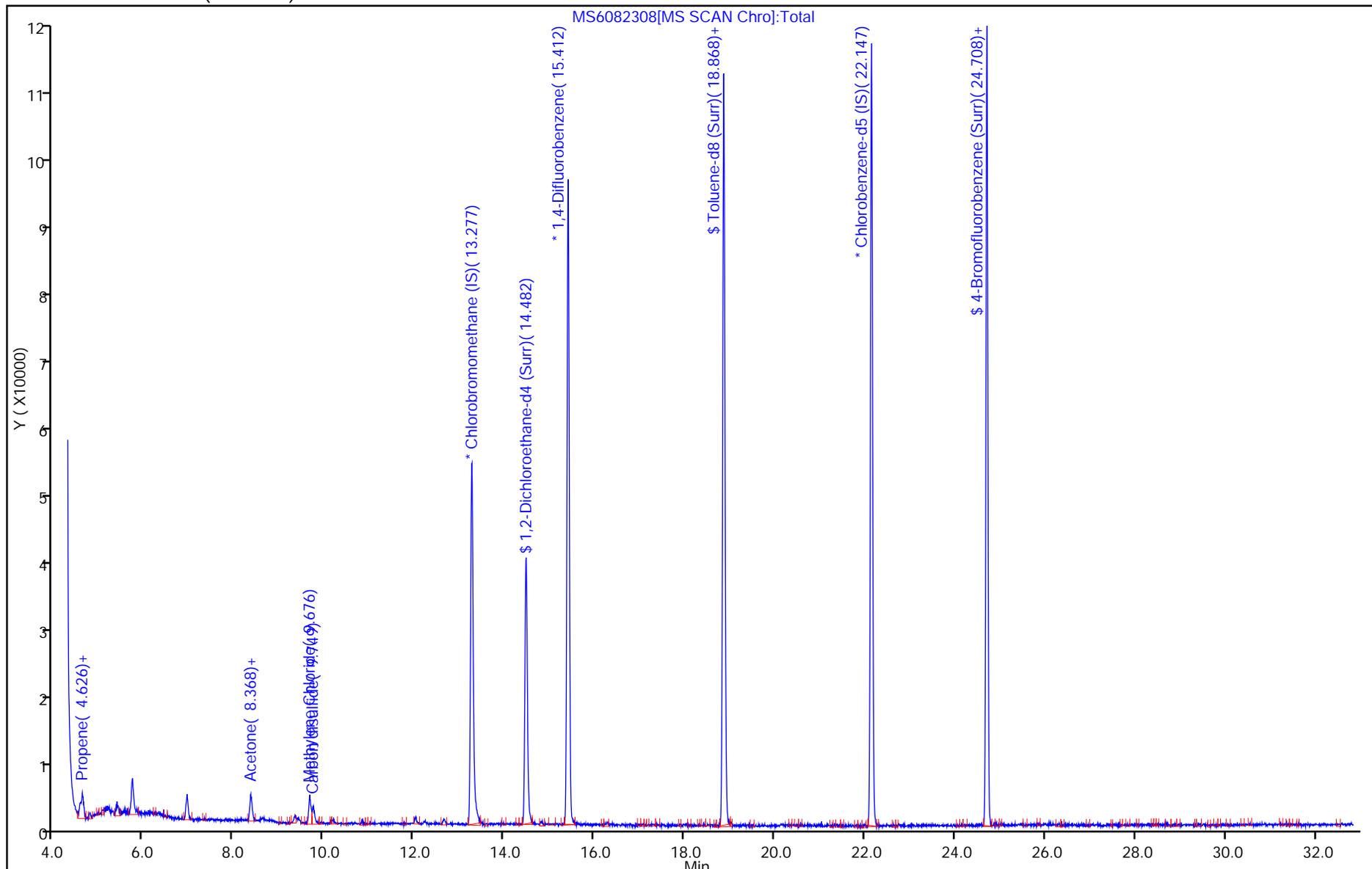
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170823-47007.b\MS6082308.D

Injection Date: 23-Aug-2017 17:53:30

Instrument ID: ATMS6

Lims ID: 320-30969-A-1

Lab Sample ID: 320-30969-1

Client ID: 34000732

Operator ID: LHS

ALS Bottle#: 6 Worklist Smp#: 7

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

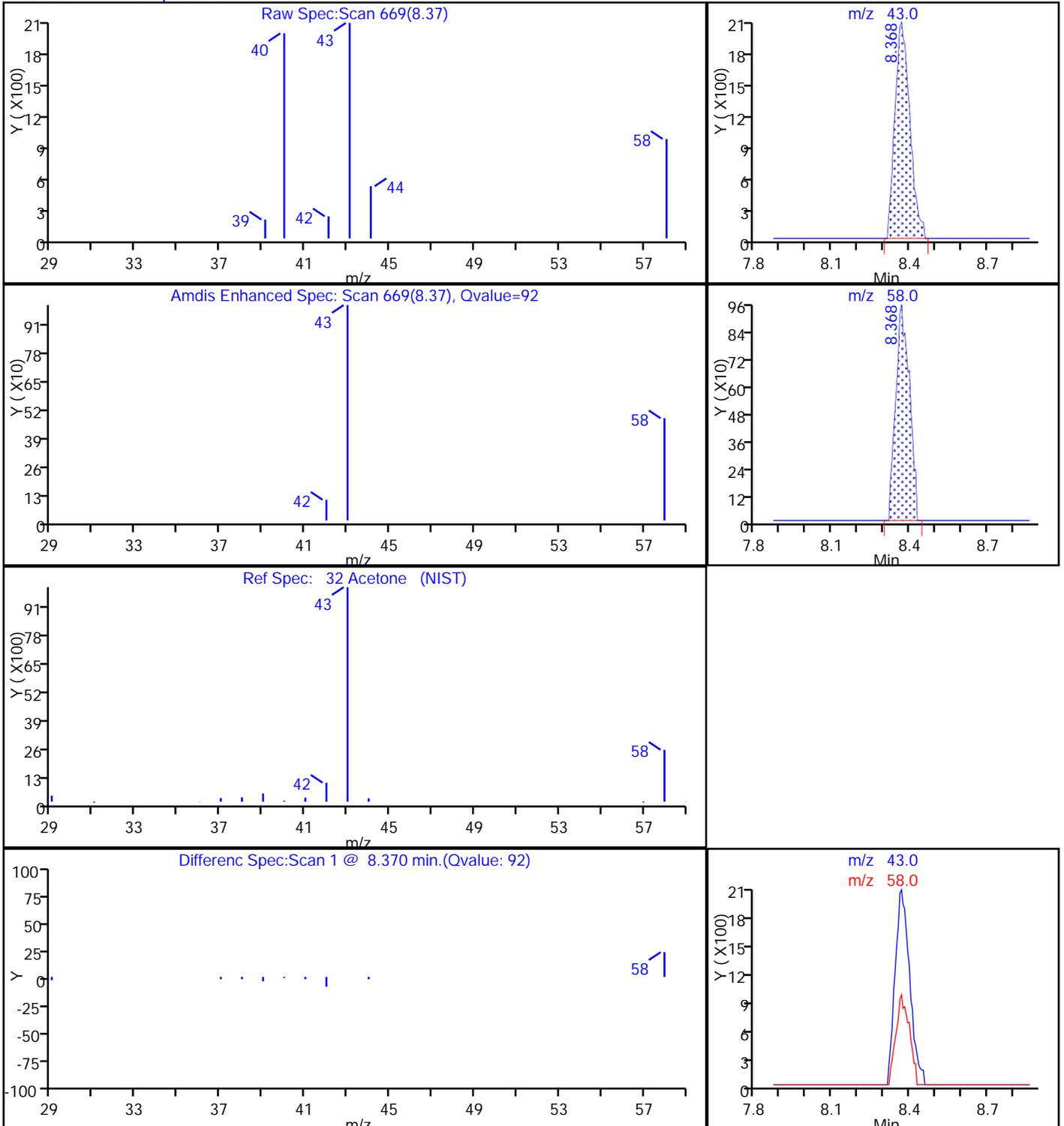
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

32 Acetone, CAS: 67-64-1



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170823-47007.b\MS6082308.D

Injection Date: 23-Aug-2017 17:53:30

Instrument ID: ATMS6

Lims ID: 320-30969-A-1

Lab Sample ID: 320-30969-1

Client ID: 34000732

Operator ID: LHS

ALS Bottle#: 6 Worklist Smp#: 7

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

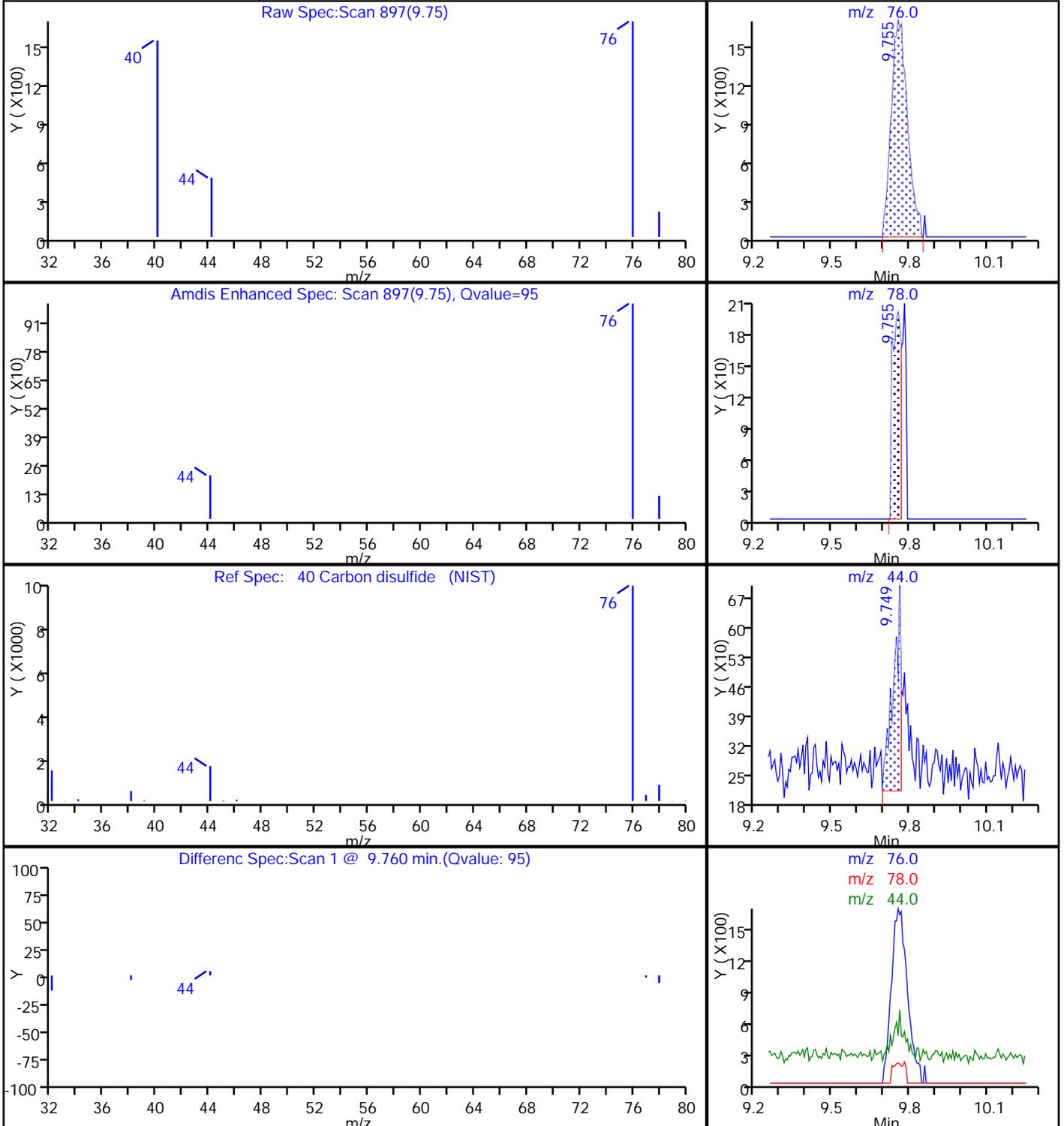
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

40 Carbon disulfide, CAS: 75-15-0



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170823-47007.b\MS6082308.D

Injection Date: 23-Aug-2017 17:53:30

Instrument ID: ATMS6

Lims ID: 320-30969-A-1

Lab Sample ID: 320-30969-1

Client ID: 34000732

Operator ID: LHS

ALS Bottle#: 6 Worklist Smp#: 7

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

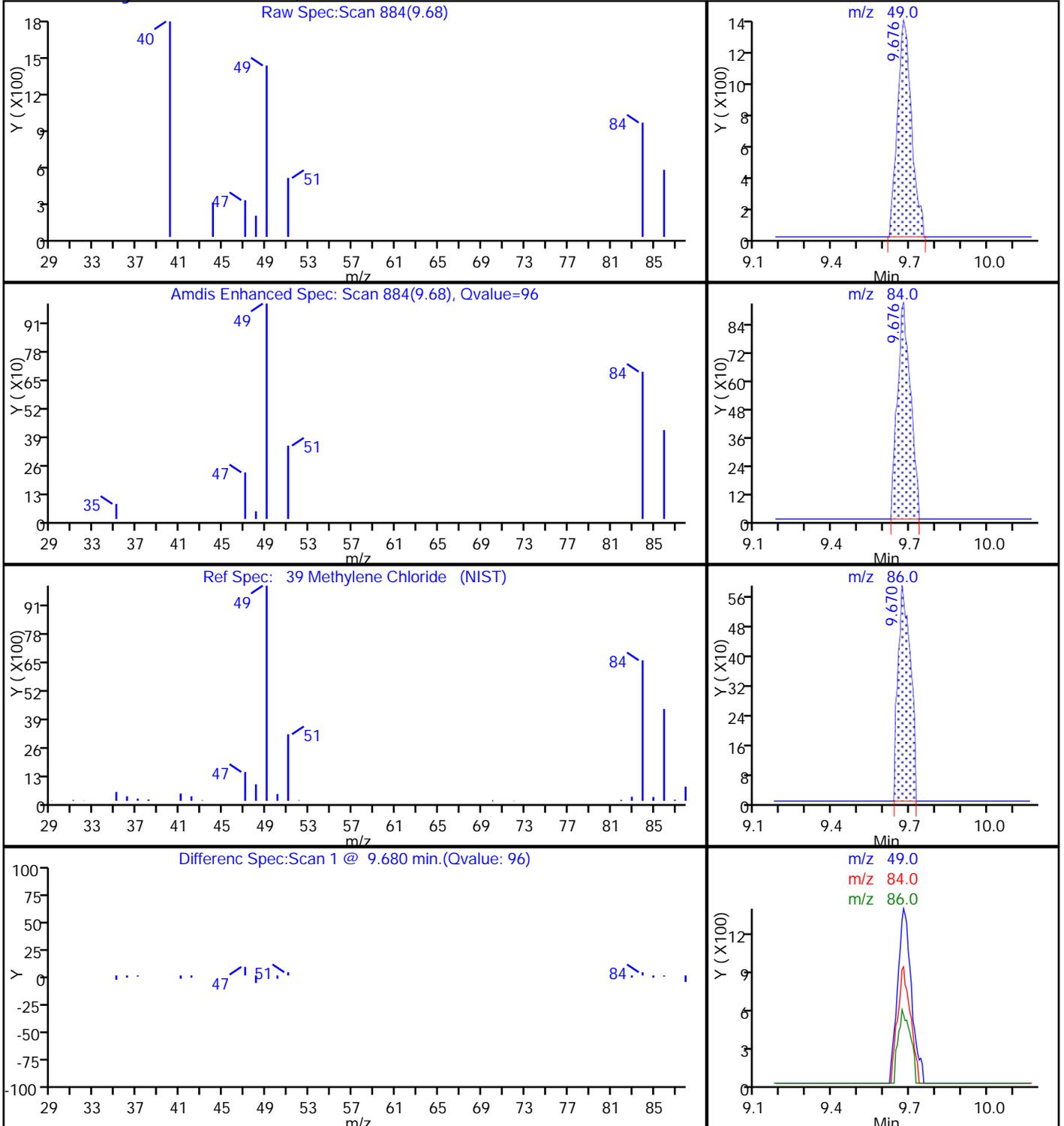
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

39 Methylene Chloride, CAS: 75-09-2



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170823-47007.b\MS6082308.D

Injection Date: 23-Aug-2017 17:53:30

Instrument ID: ATMS6

Lims ID: 320-30969-A-1

Lab Sample ID: 320-30969-1

Client ID: 34000732

Operator ID: LHS

ALS Bottle#: 6 Worklist Smp#: 7

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

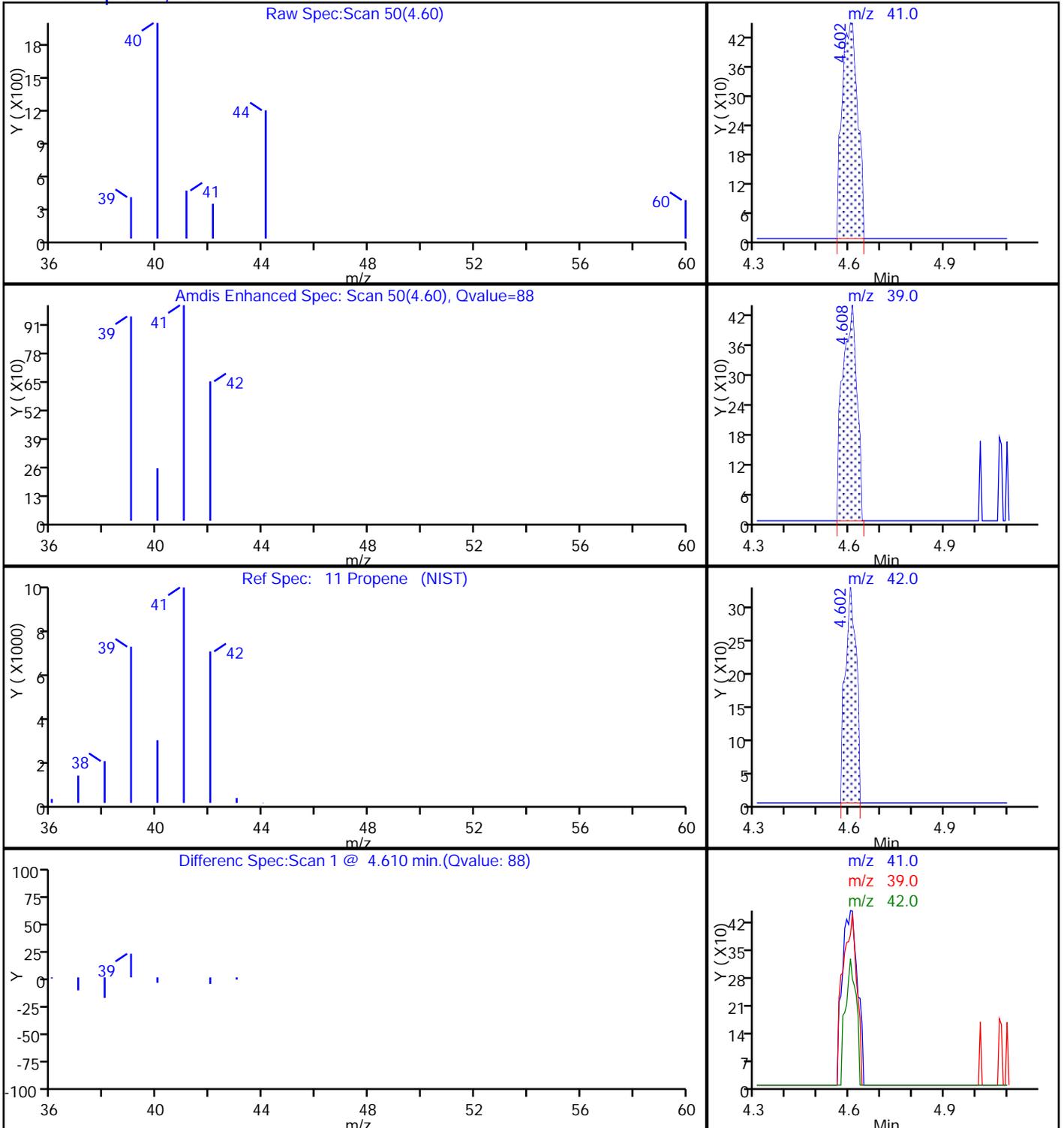
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

11 Propene, CAS: 115-07-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-31111-1
 SDG No.: _____
 Client Sample ID: 34000974 Lab Sample ID: 320-31111-1
 Matrix: Air Lab File ID: MS6082810.D
 Analysis Method: TO-15 Date Collected: 08/28/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/29/2017 11:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 181551 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	0.62	J	5.0	0.18
107-02-8	Acrolein	ND		2.0	0.22
107-13-1	Acrylonitrile	ND		2.0	0.19
107-05-1	Allyl chloride	ND		0.80	0.11
71-43-2	Benzene	ND		0.40	0.079
100-44-7	Benzyl chloride	ND		0.80	0.16
75-27-4	Bromodichloromethane	ND		0.30	0.066
75-25-2	Bromoform	ND		0.40	0.070
74-83-9	Bromomethane	ND		0.80	0.34
106-99-0	1,3-Butadiene	ND		0.80	0.15
106-97-8	n-Butane	ND		0.40	0.15
78-93-3	2-Butanone (MEK)	ND		0.80	0.20
75-65-0	tert-Butyl alcohol (TBA)	ND		2.0	0.11
104-51-8	n-Butylbenzene	ND		0.40	0.18
135-98-8	sec-Butylbenzene	ND		0.40	0.070
98-06-6	tert-Butylbenzene	ND		0.80	0.068
75-15-0	Carbon disulfide	0.17	J	0.80	0.078
56-23-5	Carbon tetrachloride	ND		0.80	0.064
108-90-7	Chlorobenzene	ND		0.30	0.064
75-45-6	Chlorodifluoromethane	ND		0.80	0.27
75-00-3	Chloroethane	ND		0.80	0.31
67-66-3	Chloroform	ND		0.30	0.095
74-87-3	Chloromethane	ND		0.80	0.20
95-49-8	2-Chlorotoluene	ND		0.40	0.080
110-82-7	Cyclohexane	ND		0.40	0.084
124-48-1	Dibromochloromethane	ND		0.40	0.079
106-93-4	1,2-Dibromoethane (EDB)	ND		0.80	0.075
74-95-3	Dibromomethane	ND		0.40	0.057
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16
95-50-1	1,2-Dichlorobenzene	ND		0.40	0.13
541-73-1	1,3-Dichlorobenzene	ND		0.40	0.11
106-46-7	1,4-Dichlorobenzene	ND		0.40	0.15
75-71-8	Dichlorodifluoromethane	ND		0.40	0.15
75-34-3	1,1-Dichloroethane	ND		0.30	0.072
107-06-2	1,2-Dichloroethane	ND		0.80	0.088

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-31111-1
 SDG No.: _____
 Client Sample ID: 34000974 Lab Sample ID: 320-31111-1
 Matrix: Air Lab File ID: MS6082810.D
 Analysis Method: TO-15 Date Collected: 08/28/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/29/2017 11:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 181551 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		0.80	0.13
156-59-2	cis-1,2-Dichloroethene	ND		0.40	0.089
156-60-5	trans-1,2-Dichloroethene	ND		0.40	0.10
78-87-5	1,2-Dichloropropane	ND		0.40	0.24
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	0.10
10061-02-6	trans-1,3-Dichloropropene	ND		0.40	0.088
123-91-1	1,4-Dioxane	ND		0.80	0.10
141-78-6	Ethyl acetate	ND		0.30	0.18
100-41-4	Ethylbenzene	ND		0.40	0.063
622-96-8	4-Ethyltoluene	ND		0.40	0.19
142-82-5	n-Heptane	ND		0.80	0.063
87-68-3	Hexachlorobutadiene	ND		2.0	0.43
110-54-3	n-Hexane	ND		0.80	0.075
591-78-6	2-Hexanone	ND		0.40	0.087
98-82-8	Isopropylbenzene	ND		0.80	0.10
99-87-6	4-Isopropyltoluene	ND		0.80	0.12
1634-04-4	Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12
80-62-6	Methyl methacrylate	ND		0.80	0.16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14
75-09-2	Methylene Chloride	ND		0.40	0.072
98-83-9	alpha-Methylstyrene	ND		0.40	0.065
91-20-3	Naphthalene	ND		0.80	0.56
111-65-9	n-Octane	ND		0.40	0.055
109-66-0	n-Pentane	ND		0.80	0.26
115-07-1	Propylene	0.14	J	0.40	0.099
103-65-1	N-Propylbenzene	ND		0.40	0.059
100-42-5	Styrene	ND		0.40	0.059
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.40	0.069
127-18-4	Tetrachloroethene	ND		0.40	0.051
109-99-9	Tetrahydrofuran	0.27	J	0.80	0.21
108-88-3	Toluene	ND		0.40	0.051
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.43
71-55-6	1,1,1-Trichloroethane	ND		0.30	0.065
79-00-5	1,1,2-Trichloroethane	ND		0.40	0.067

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-31111-1
 SDG No.: _____
 Client Sample ID: 34000974 Lab Sample ID: 320-31111-1
 Matrix: Air Lab File ID: MS6082810.D
 Analysis Method: TO-15 Date Collected: 08/28/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/29/2017 11:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 181551 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.24	J	0.40	0.11
75-69-4	Trichlorofluoromethane	ND		0.40	0.20
96-18-4	1,2,3-Trichloropropane	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	ND		0.80	0.16
108-67-8	1,3,5-Trimethylbenzene	ND		0.40	0.13
540-84-1	2,2,4-Trimethylpentane	ND		0.40	0.071
108-05-4	Vinyl acetate	ND		0.80	0.15
593-60-2	Vinyl bromide	ND		0.80	0.26
75-01-4	Vinyl chloride	ND		0.40	0.12
179601-23-1	m,p-Xylene	ND		0.80	0.10
95-47-6	o-Xylene	ND		0.40	0.054

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		70-130
2037-26-5	Toluene-d8 (Surr)	93		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D
 Lims ID: 320-31111-A-1
 Client ID: 34000974
 Sample Type: Client
 Inject. Date: 29-Aug-2017 11:03:30 ALS Bottle#: 7 Worklist Smp#: 10
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 320-31095-A-1
 Misc. Info.: 500 mL CAN CERT
 Operator ID: LHS Instrument ID: ATMS6
 Method: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\TO15_ATMS6.m
 Limit Group: MSA - TO15 - ICAL
 Last Update: 29-Aug-2017 12:05:58 Calib Date: 01-Aug-2017 02:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Sacramento\ChromData\ATMS6\20170801-46103.b\MS6073112.D
 Column 1 : RTX Volatiles (0.32 mm) Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: leeh Date: 29-Aug-2017 12:05:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	13.283	13.295	-0.012	98	36633	4.00	
* 2 1,4-Difluorobenzene	114	15.424	15.431	-0.007	95	135937	4.00	
* 3 Chlorobenzene-d5 (IS)	117	22.159	22.153	0.006	87	108687	4.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	14.488	14.494	-0.006	35	52909	4.55	
\$ 5 Toluene-d8 (Surr)	100	18.880	18.874	0.006	99	81266	3.73	
\$ 6 4-Bromofluorobenzene (Surr	95	24.714	24.714	0.000	94	53861	3.10	
11 Propene	41	4.608	4.614	-0.006	64	1182	0.1371	
16 Chloromethane	50	5.198	5.198	0.000	91	1502	0.1618	
32 Acetone	43	8.374	8.307	0.067	93	10655	0.6226	
40 Carbon disulfide	76	9.767	9.773	-0.006	96	5063	0.1733	
54 Tetrahydrofuran	42	13.484	13.435	0.049	88	4053	0.2688	
65 Trichloroethene	130	16.221	16.222	-0.001	94	3617	0.2412	

Reagents:

VAMISIS20_00030 Amount Added: 50.00 Units: mL Run Reagent

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Operator ID: LHS

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Worklist Smp#: 10

Client ID: 34000974

Purge Vol: 25.000 mL

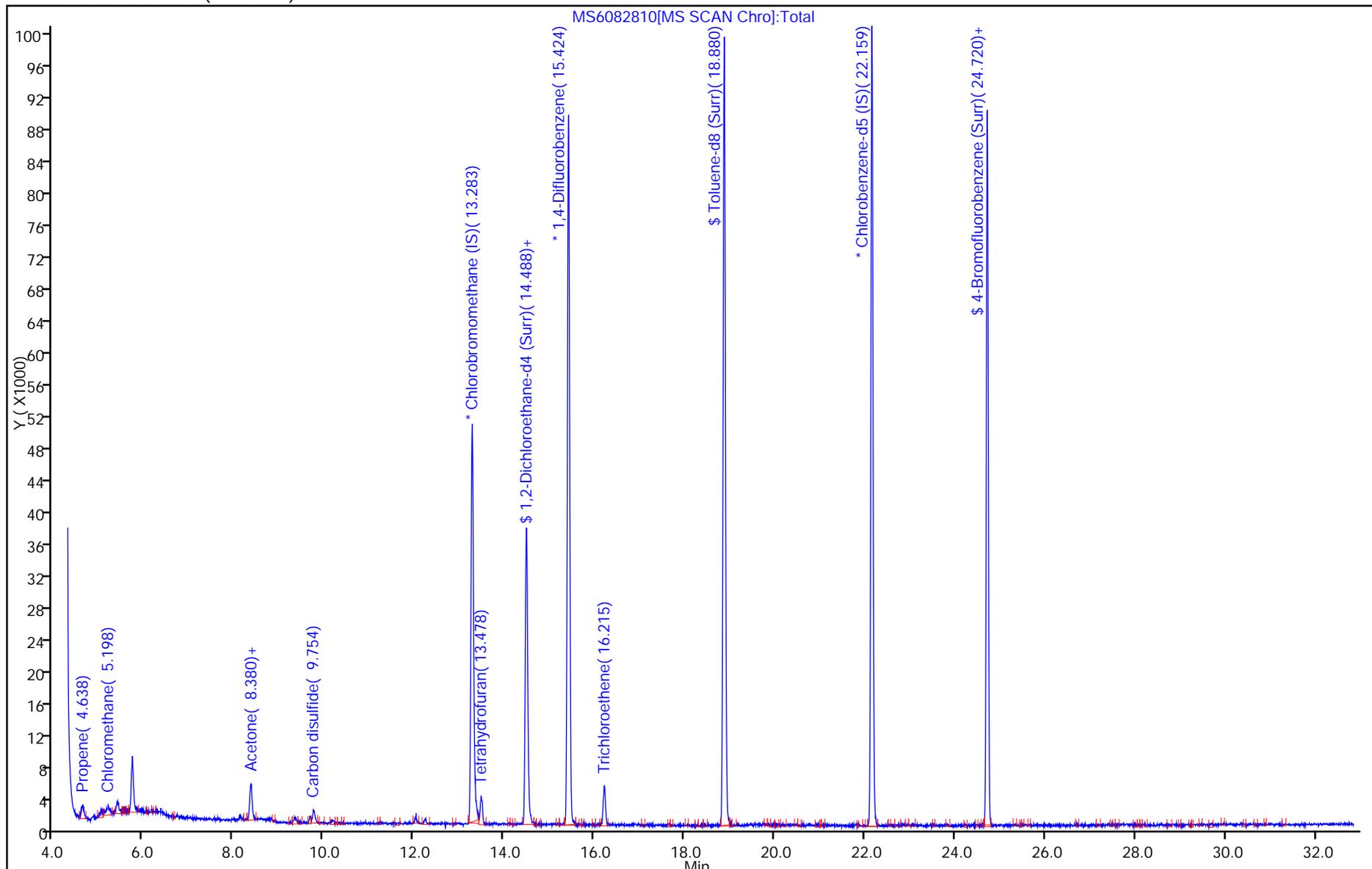
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Client ID: 34000974

Operator ID: LHS

ALS Bottle#: 7 Worklist Smp#: 10

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

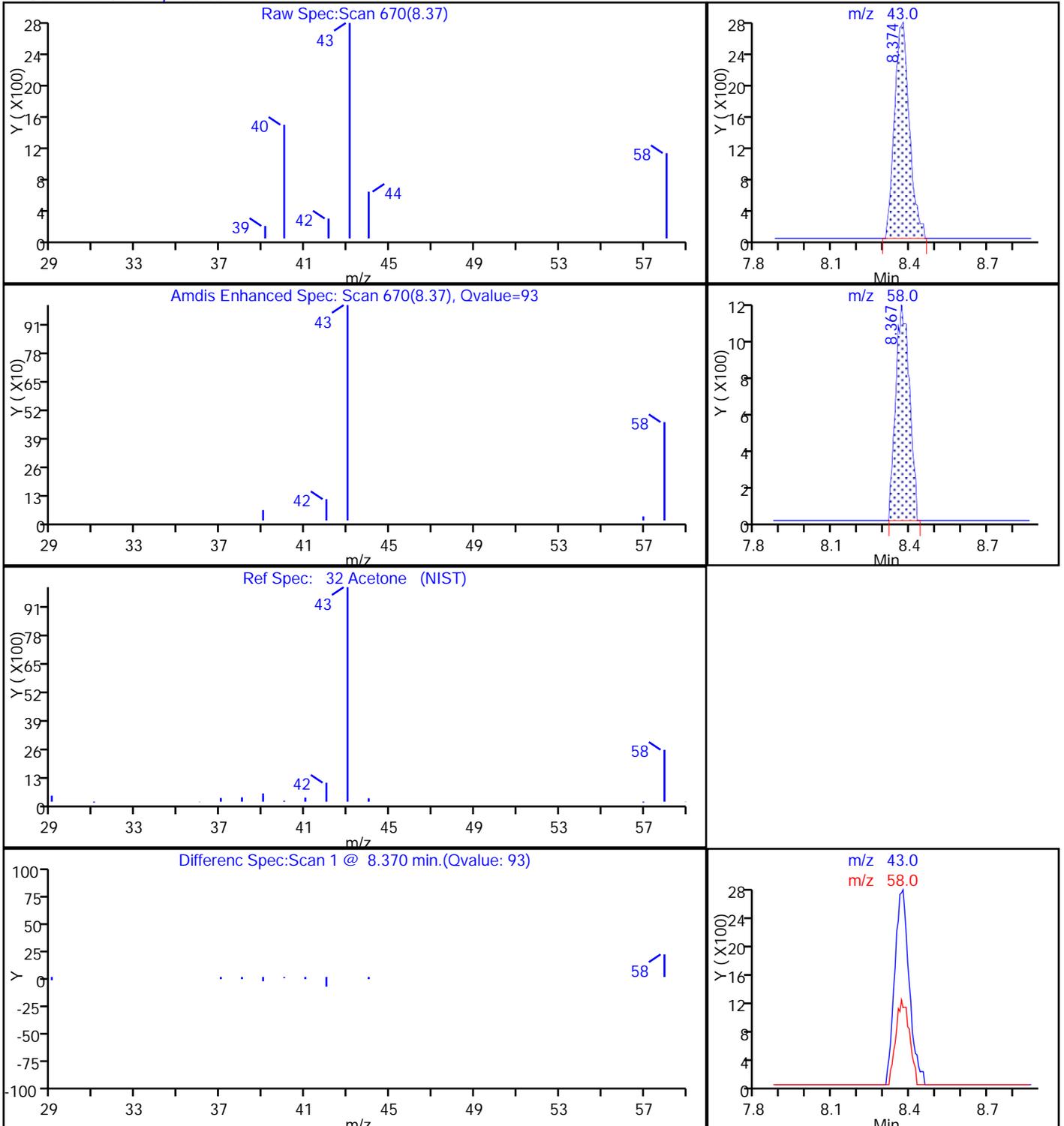
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

32 Acetone, CAS: 67-64-1



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TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Client ID: 34000974

Operator ID: LHS

ALS Bottle#: 7 Worklist Smp#: 10

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

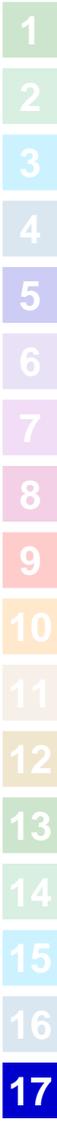
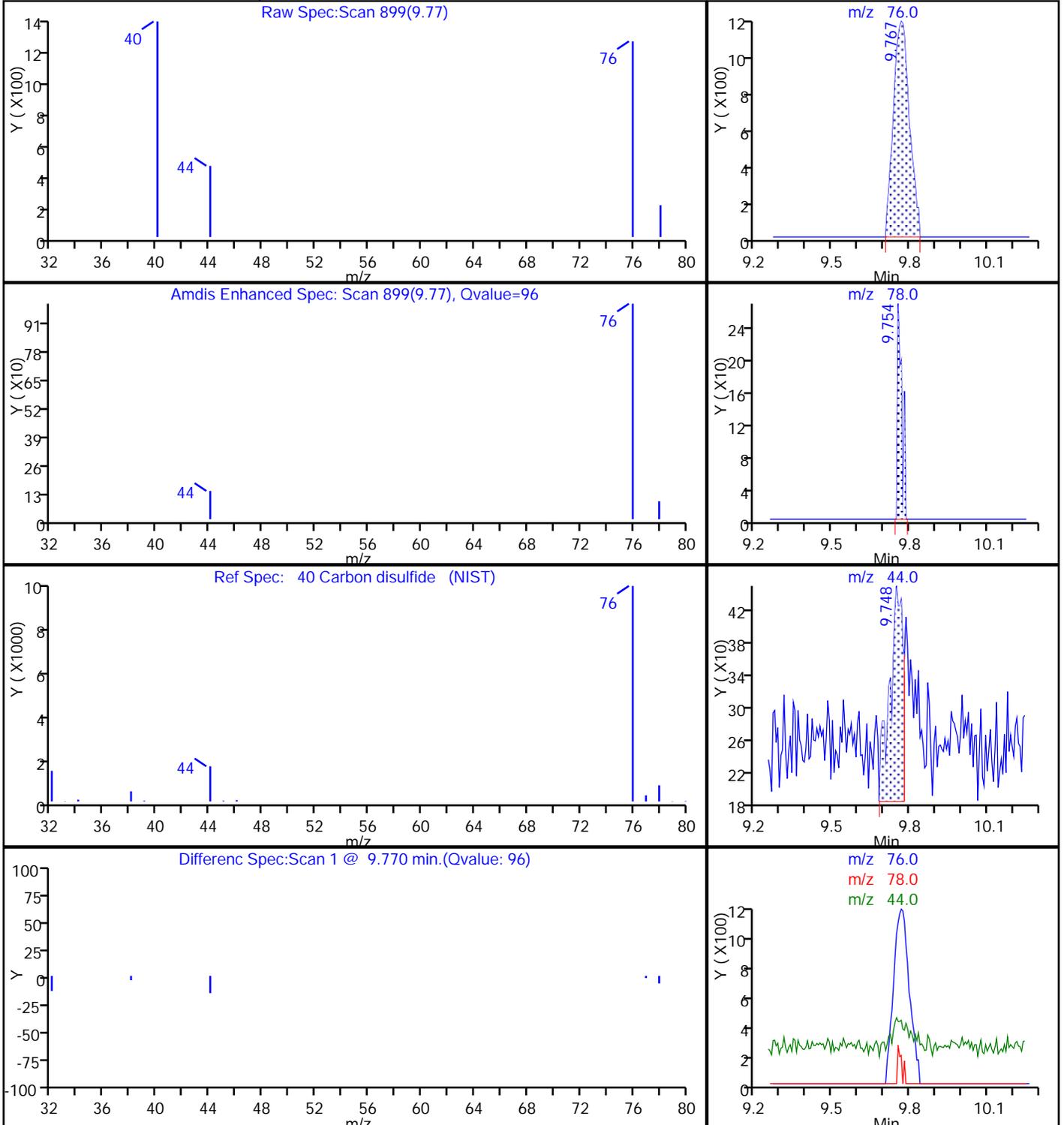
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

40 Carbon disulfide, CAS: 75-15-0



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Client ID: 34000974

Operator ID: LHS

ALS Bottle#: 7 Worklist Smp#: 10

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

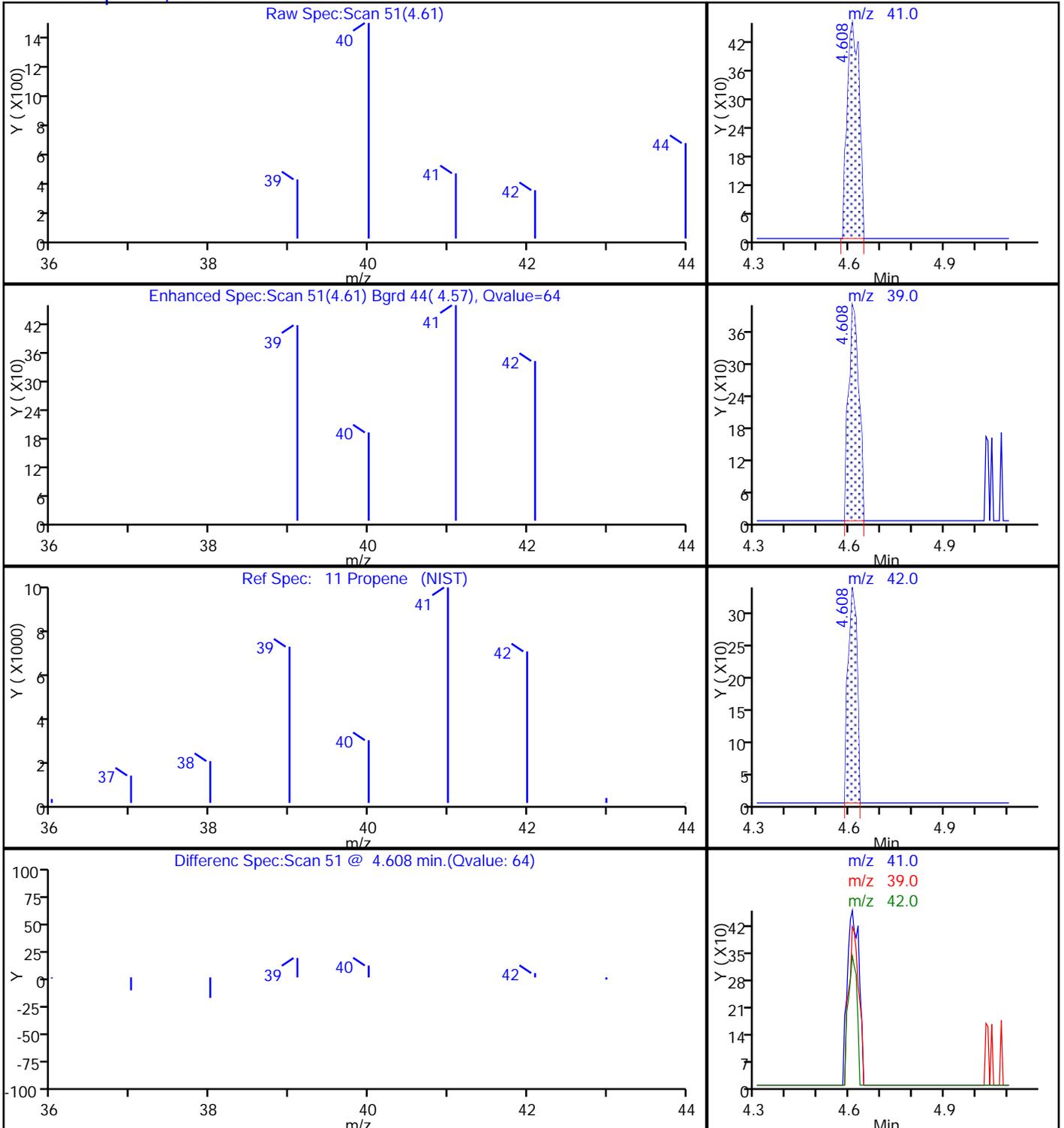
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

11 Propene, CAS: 115-07-1



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Client ID: 34000974

Operator ID: LHS

ALS Bottle#: 7 Worklist Smp#: 10

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

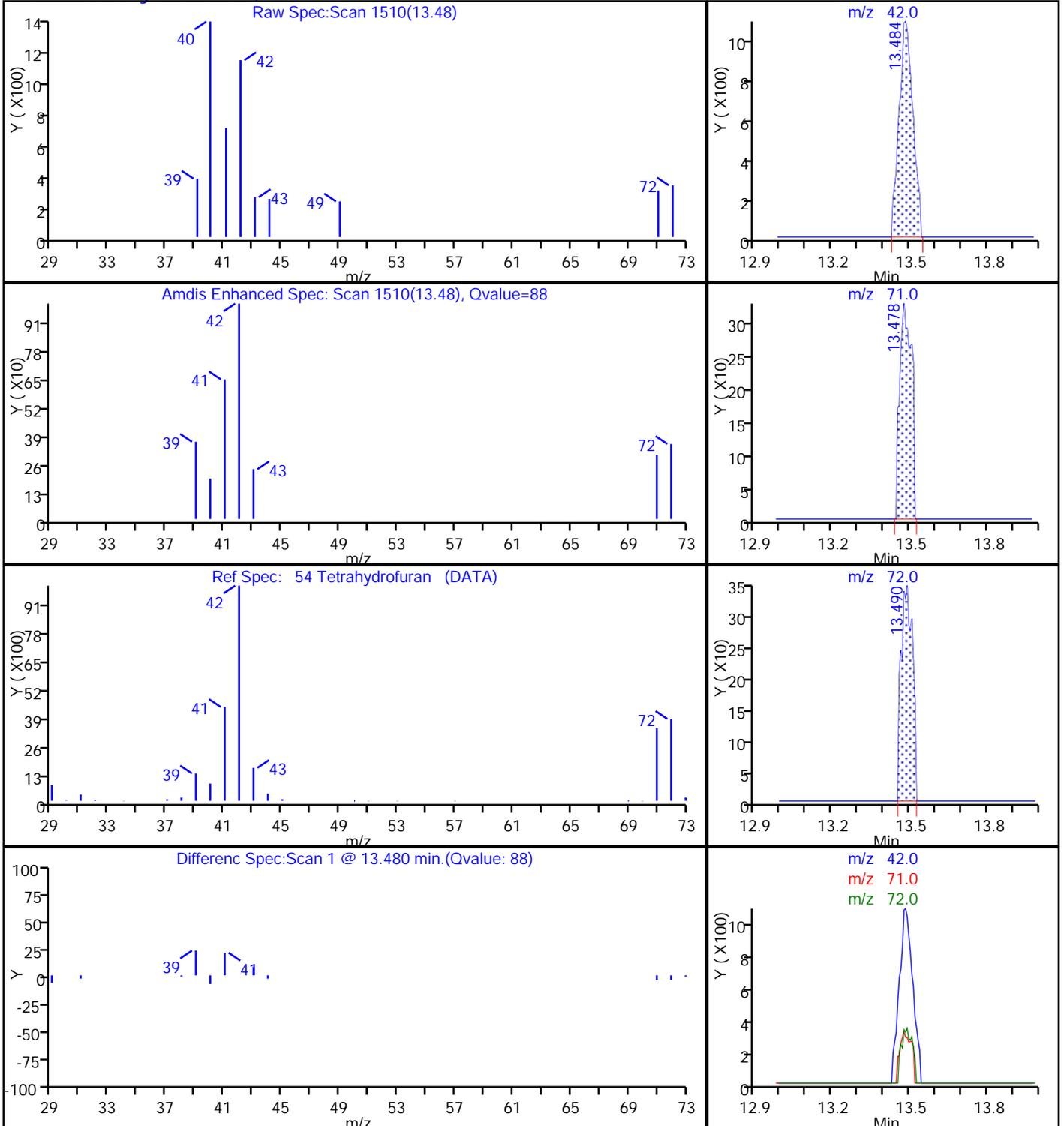
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

54 Tetrahydrofuran, CAS: 109-99-9



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Client ID: 34000974

Operator ID: LHS

ALS Bottle#: 7 Worklist Smp#: 10

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

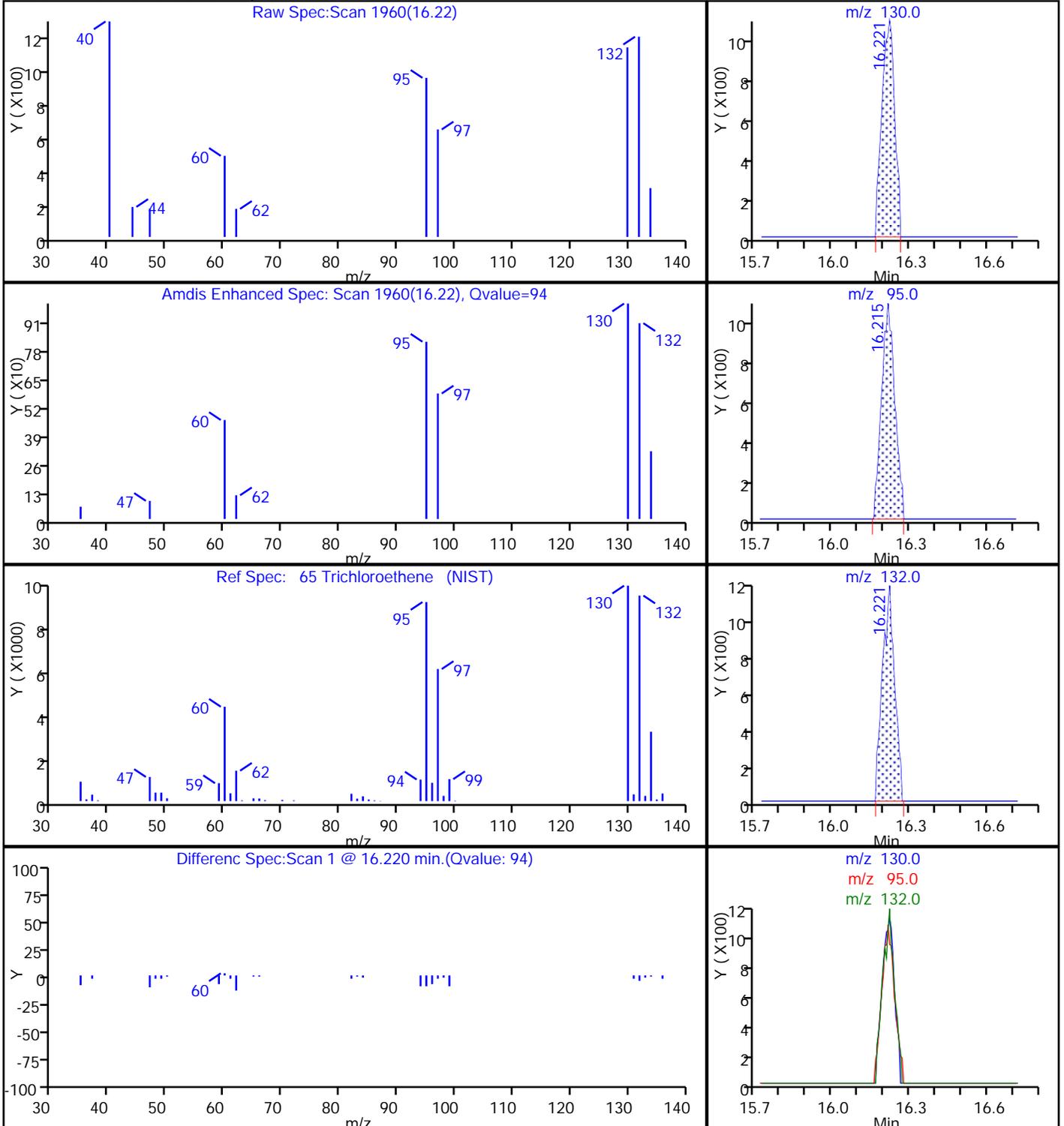
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

65 Trichloroethene, CAS: 79-01-6



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-31646-1
Client Project/Site: 088751,6714 Walker St

For:
GHD Services Inc.
1801 Old Highway 8 NW
Suite 114
St. Paul, Minnesota 55112

Attn: Mr. Grant Anderson



Authorized for release by:
9/28/2017 10:30:33 AM

Laura Turpen, Project Manager I
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LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Job ID: 320-31646-1

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative 320-31646-1

Comments

No additional comments.

Receipt

The samples were received on 9/19/2017 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Air - GC/MS VOA

Method(s) TO-15: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 186268 recovered outside control limits for the following analytes: Bromomethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) TO-15: The continuing calibration verification (CCV) associated with batch 186268 recovered above the upper control limit for Bromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: SVE-1-170915-RA-01 (320-31646-1), SVE-2-170915-RA-02 (320-31646-2), (CCVIS 320-186268/2) and (MB 320-186268/6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Detection Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Client Sample ID: SVE-1-170915-RA-01

Lab Sample ID: 320-31646-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	68		9.9	ppb v/v	1.97		TO-15	Total/NA
Benzene	1.4		0.79	ppb v/v	1.97		TO-15	Total/NA
2-Butanone (MEK)	3.8		1.6	ppb v/v	1.97		TO-15	Total/NA
Dichlorodifluoromethane	0.81		0.79	ppb v/v	1.97		TO-15	Total/NA
Methylene Chloride	3.0		0.79	ppb v/v	1.97		TO-15	Total/NA
Tetrachloroethene	14		0.79	ppb v/v	1.97		TO-15	Total/NA
Toluene	4.2		0.79	ppb v/v	1.97		TO-15	Total/NA
Trichloroethene	1.3		0.79	ppb v/v	1.97		TO-15	Total/NA
Trichlorofluoromethane	1.5		0.79	ppb v/v	1.97		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	160		23	ug/m3	1.97		TO-15	Total/NA
Benzene	4.5		2.5	ug/m3	1.97		TO-15	Total/NA
2-Butanone (MEK)	11		4.6	ug/m3	1.97		TO-15	Total/NA
Dichlorodifluoromethane	4.0		3.9	ug/m3	1.97		TO-15	Total/NA
Methylene Chloride	10		2.7	ug/m3	1.97		TO-15	Total/NA
Tetrachloroethene	98		5.3	ug/m3	1.97		TO-15	Total/NA
Toluene	16		3.0	ug/m3	1.97		TO-15	Total/NA
Trichloroethene	7.2		4.2	ug/m3	1.97		TO-15	Total/NA
Trichlorofluoromethane	8.6		4.4	ug/m3	1.97		TO-15	Total/NA

Client Sample ID: SVE-2-170915-RA-02

Lab Sample ID: 320-31646-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	37		11	ppb v/v	2.1		TO-15	Total/NA
2-Butanone (MEK)	3.2		1.7	ppb v/v	2.1		TO-15	Total/NA
Carbon disulfide	4.4		1.7	ppb v/v	2.1		TO-15	Total/NA
Dichlorodifluoromethane	3.9		0.84	ppb v/v	2.1		TO-15	Total/NA
Methylene Chloride	3.2		0.84	ppb v/v	2.1		TO-15	Total/NA
Tetrachloroethene	3.4		0.84	ppb v/v	2.1		TO-15	Total/NA
Trichloroethene	5.9		0.84	ppb v/v	2.1		TO-15	Total/NA
Trichlorofluoromethane	1.0		0.84	ppb v/v	2.1		TO-15	Total/NA
Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	87		25	ug/m3	2.1		TO-15	Total/NA
2-Butanone (MEK)	9.4		5.0	ug/m3	2.1		TO-15	Total/NA
Carbon disulfide	14		5.2	ug/m3	2.1		TO-15	Total/NA
Dichlorodifluoromethane	19		4.2	ug/m3	2.1		TO-15	Total/NA
Methylene Chloride	11		2.9	ug/m3	2.1		TO-15	Total/NA
Tetrachloroethene	23		5.7	ug/m3	2.1		TO-15	Total/NA
Trichloroethene	32		4.5	ug/m3	2.1		TO-15	Total/NA
Trichlorofluoromethane	5.9		4.7	ug/m3	2.1		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Client Sample ID: SVE-1-170915-RA-01

Lab Sample ID: 320-31646-1

Date Collected: 09/15/17 13:00

Matrix: Air

Date Received: 09/19/17 09:50

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	68		9.9	ppb v/v			09/27/17 07:22	1.97
Benzene	1.4		0.79	ppb v/v			09/27/17 07:22	1.97
Benzyl chloride	ND		1.6	ppb v/v			09/27/17 07:22	1.97
Bromodichloromethane	ND		0.59	ppb v/v			09/27/17 07:22	1.97
Bromoform	ND		0.79	ppb v/v			09/27/17 07:22	1.97
Bromomethane	ND *		1.6	ppb v/v			09/27/17 07:22	1.97
2-Butanone (MEK)	3.8		1.6	ppb v/v			09/27/17 07:22	1.97
Carbon disulfide	ND		1.6	ppb v/v			09/27/17 07:22	1.97
Carbon tetrachloride	ND		1.6	ppb v/v			09/27/17 07:22	1.97
Chlorobenzene	ND		0.59	ppb v/v			09/27/17 07:22	1.97
Dibromochloromethane	ND		0.79	ppb v/v			09/27/17 07:22	1.97
Chloroethane	ND		1.6	ppb v/v			09/27/17 07:22	1.97
Chloroform	ND		0.59	ppb v/v			09/27/17 07:22	1.97
Chloromethane	ND		1.6	ppb v/v			09/27/17 07:22	1.97
1,2-Dibromoethane (EDB)	ND		1.6	ppb v/v			09/27/17 07:22	1.97
1,2-Dichlorobenzene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
1,3-Dichlorobenzene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
1,4-Dichlorobenzene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
Dichlorodifluoromethane	0.81		0.79	ppb v/v			09/27/17 07:22	1.97
1,1-Dichloroethane	ND		0.59	ppb v/v			09/27/17 07:22	1.97
1,2-Dichloroethane	ND		1.6	ppb v/v			09/27/17 07:22	1.97
1,1-Dichloroethene	ND		1.6	ppb v/v			09/27/17 07:22	1.97
cis-1,2-Dichloroethene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
trans-1,2-Dichloroethene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
1,2-Dichloropropane	ND		0.79	ppb v/v			09/27/17 07:22	1.97
cis-1,3-Dichloropropene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
trans-1,3-Dichloropropene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.79	ppb v/v			09/27/17 07:22	1.97
Ethylbenzene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
4-Ethyltoluene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
Hexachlorobutadiene	ND		3.9	ppb v/v			09/27/17 07:22	1.97
2-Hexanone	ND		0.79	ppb v/v			09/27/17 07:22	1.97
Methylene Chloride	3.0		0.79	ppb v/v			09/27/17 07:22	1.97
4-Methyl-2-pentanone (MIBK)	ND		0.79	ppb v/v			09/27/17 07:22	1.97
Styrene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
1,1,2,2-Tetrachloroethane	ND		0.79	ppb v/v			09/27/17 07:22	1.97
Tetrachloroethene	14		0.79	ppb v/v			09/27/17 07:22	1.97
Toluene	4.2		0.79	ppb v/v			09/27/17 07:22	1.97
1,2,4-Trichlorobenzene	ND		3.9	ppb v/v			09/27/17 07:22	1.97
1,1,1-Trichloroethane	ND		0.59	ppb v/v			09/27/17 07:22	1.97
1,1,2-Trichloroethane	ND		0.79	ppb v/v			09/27/17 07:22	1.97
Trichloroethene	1.3		0.79	ppb v/v			09/27/17 07:22	1.97
Trichlorofluoromethane	1.5		0.79	ppb v/v			09/27/17 07:22	1.97
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.79	ppb v/v			09/27/17 07:22	1.97
1,2,4-Trimethylbenzene	ND		1.6	ppb v/v			09/27/17 07:22	1.97
1,3,5-Trimethylbenzene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
Vinyl acetate	ND		1.6	ppb v/v			09/27/17 07:22	1.97
Vinyl chloride	ND		0.79	ppb v/v			09/27/17 07:22	1.97

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Client Sample ID: SVE-1-170915-RA-01

Lab Sample ID: 320-31646-1

Date Collected: 09/15/17 13:00

Matrix: Air

Date Received: 09/19/17 09:50

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	ND		1.6	ppb v/v			09/27/17 07:22	1.97
o-Xylene	ND		0.79	ppb v/v			09/27/17 07:22	1.97
Naphthalene	ND		1.6	ppb v/v			09/27/17 07:22	1.97
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	160		23	ug/m3			09/27/17 07:22	1.97
Benzene	4.5		2.5	ug/m3			09/27/17 07:22	1.97
Benzyl chloride	ND		8.2	ug/m3			09/27/17 07:22	1.97
Bromodichloromethane	ND		4.0	ug/m3			09/27/17 07:22	1.97
Bromoform	ND		8.1	ug/m3			09/27/17 07:22	1.97
Bromomethane	ND	*	6.1	ug/m3			09/27/17 07:22	1.97
2-Butanone (MEK)	11		4.6	ug/m3			09/27/17 07:22	1.97
Carbon disulfide	ND		4.9	ug/m3			09/27/17 07:22	1.97
Carbon tetrachloride	ND		9.9	ug/m3			09/27/17 07:22	1.97
Chlorobenzene	ND		2.7	ug/m3			09/27/17 07:22	1.97
Dibromochloromethane	ND		6.7	ug/m3			09/27/17 07:22	1.97
Chloroethane	ND		4.2	ug/m3			09/27/17 07:22	1.97
Chloroform	ND		2.9	ug/m3			09/27/17 07:22	1.97
Chloromethane	ND		3.3	ug/m3			09/27/17 07:22	1.97
1,2-Dibromoethane (EDB)	ND		12	ug/m3			09/27/17 07:22	1.97
1,2-Dichlorobenzene	ND		4.7	ug/m3			09/27/17 07:22	1.97
1,3-Dichlorobenzene	ND		4.7	ug/m3			09/27/17 07:22	1.97
1,4-Dichlorobenzene	ND		4.7	ug/m3			09/27/17 07:22	1.97
Dichlorodifluoromethane	4.0		3.9	ug/m3			09/27/17 07:22	1.97
1,1-Dichloroethane	ND		2.4	ug/m3			09/27/17 07:22	1.97
1,2-Dichloroethane	ND		6.4	ug/m3			09/27/17 07:22	1.97
1,1-Dichloroethene	ND		6.2	ug/m3			09/27/17 07:22	1.97
cis-1,2-Dichloroethene	ND		3.1	ug/m3			09/27/17 07:22	1.97
trans-1,2-Dichloroethene	ND		3.1	ug/m3			09/27/17 07:22	1.97
1,2-Dichloropropane	ND		3.6	ug/m3			09/27/17 07:22	1.97
cis-1,3-Dichloropropene	ND		3.6	ug/m3			09/27/17 07:22	1.97
trans-1,3-Dichloropropene	ND		3.6	ug/m3			09/27/17 07:22	1.97
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		5.5	ug/m3			09/27/17 07:22	1.97
Ethylbenzene	ND		3.4	ug/m3			09/27/17 07:22	1.97
4-Ethyltoluene	ND		3.9	ug/m3			09/27/17 07:22	1.97
Hexachlorobutadiene	ND		42	ug/m3			09/27/17 07:22	1.97
2-Hexanone	ND		3.2	ug/m3			09/27/17 07:22	1.97
Methylene Chloride	10		2.7	ug/m3			09/27/17 07:22	1.97
4-Methyl-2-pentanone (MIBK)	ND		3.2	ug/m3			09/27/17 07:22	1.97
Styrene	ND		3.4	ug/m3			09/27/17 07:22	1.97
1,1,2,2-Tetrachloroethane	ND		5.4	ug/m3			09/27/17 07:22	1.97
Tetrachloroethene	98		5.3	ug/m3			09/27/17 07:22	1.97
Toluene	16		3.0	ug/m3			09/27/17 07:22	1.97
1,2,4-Trichlorobenzene	ND		29	ug/m3			09/27/17 07:22	1.97
1,1,1-Trichloroethane	ND		3.2	ug/m3			09/27/17 07:22	1.97
1,1,2-Trichloroethane	ND		4.3	ug/m3			09/27/17 07:22	1.97
Trichloroethene	7.2		4.2	ug/m3			09/27/17 07:22	1.97
Trichlorofluoromethane	8.6		4.4	ug/m3			09/27/17 07:22	1.97
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.0	ug/m3			09/27/17 07:22	1.97

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Client Sample ID: SVE-1-170915-RA-01

Lab Sample ID: 320-31646-1

Date Collected: 09/15/17 13:00

Matrix: Air

Date Received: 09/19/17 09:50

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		7.7	ug/m3			09/27/17 07:22	1.97
1,3,5-Trimethylbenzene	ND		3.9	ug/m3			09/27/17 07:22	1.97
Vinyl acetate	ND		5.5	ug/m3			09/27/17 07:22	1.97
Vinyl chloride	ND		2.0	ug/m3			09/27/17 07:22	1.97
m,p-Xylene	ND		6.8	ug/m3			09/27/17 07:22	1.97
o-Xylene	ND		3.4	ug/m3			09/27/17 07:22	1.97
Naphthalene	ND		8.3	ug/m3			09/27/17 07:22	1.97
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130				09/27/17 07:22	1.97
1,2-Dichloroethane-d4 (Surr)	88		70 - 130				09/27/17 07:22	1.97
Toluene-d8 (Surr)	94		70 - 130				09/27/17 07:22	1.97

Client Sample ID: SVE-2-170915-RA-02

Lab Sample ID: 320-31646-2

Date Collected: 09/15/17 13:00

Matrix: Air

Date Received: 09/19/17 09:50

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	37		11	ppb v/v			09/27/17 01:44	2.1
Benzene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Benzyl chloride	ND		1.7	ppb v/v			09/27/17 01:44	2.1
Bromodichloromethane	ND		0.63	ppb v/v			09/27/17 01:44	2.1
Bromoform	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Bromomethane	ND *		1.7	ppb v/v			09/27/17 01:44	2.1
2-Butanone (MEK)	3.2		1.7	ppb v/v			09/27/17 01:44	2.1
Carbon disulfide	4.4		1.7	ppb v/v			09/27/17 01:44	2.1
Carbon tetrachloride	ND		1.7	ppb v/v			09/27/17 01:44	2.1
Chlorobenzene	ND		0.63	ppb v/v			09/27/17 01:44	2.1
Dibromochloromethane	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Chloroethane	ND		1.7	ppb v/v			09/27/17 01:44	2.1
Chloroform	ND		0.63	ppb v/v			09/27/17 01:44	2.1
Chloromethane	ND		1.7	ppb v/v			09/27/17 01:44	2.1
1,2-Dibromoethane (EDB)	ND		1.7	ppb v/v			09/27/17 01:44	2.1
1,2-Dichlorobenzene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
1,3-Dichlorobenzene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
1,4-Dichlorobenzene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Dichlorodifluoromethane	3.9		0.84	ppb v/v			09/27/17 01:44	2.1
1,1-Dichloroethane	ND		0.63	ppb v/v			09/27/17 01:44	2.1
1,2-Dichloroethane	ND		1.7	ppb v/v			09/27/17 01:44	2.1
1,1-Dichloroethene	ND		1.7	ppb v/v			09/27/17 01:44	2.1
cis-1,2-Dichloroethene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
trans-1,2-Dichloroethene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
1,2-Dichloropropane	ND		0.84	ppb v/v			09/27/17 01:44	2.1
cis-1,3-Dichloropropene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
trans-1,3-Dichloropropene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Ethylbenzene	ND		0.84	ppb v/v			09/27/17 01:44	2.1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Client Sample ID: SVE-2-170915-RA-02

Lab Sample ID: 320-31646-2

Date Collected: 09/15/17 13:00

Matrix: Air

Date Received: 09/19/17 09:50

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Ethyltoluene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Hexachlorobutadiene	ND		4.2	ppb v/v			09/27/17 01:44	2.1
2-Hexanone	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Methylene Chloride	3.2		0.84	ppb v/v			09/27/17 01:44	2.1
4-Methyl-2-pentanone (MIBK)	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Styrene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
1,1,2,2-Tetrachloroethane	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Tetrachloroethene	3.4		0.84	ppb v/v			09/27/17 01:44	2.1
Toluene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
1,2,4-Trichlorobenzene	ND		4.2	ppb v/v			09/27/17 01:44	2.1
1,1,1-Trichloroethane	ND		0.63	ppb v/v			09/27/17 01:44	2.1
1,1,2-Trichloroethane	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Trichloroethene	5.9		0.84	ppb v/v			09/27/17 01:44	2.1
Trichlorofluoromethane	1.0		0.84	ppb v/v			09/27/17 01:44	2.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.84	ppb v/v			09/27/17 01:44	2.1
1,2,4-Trimethylbenzene	ND		1.7	ppb v/v			09/27/17 01:44	2.1
1,3,5-Trimethylbenzene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Vinyl acetate	ND		1.7	ppb v/v			09/27/17 01:44	2.1
Vinyl chloride	ND		0.84	ppb v/v			09/27/17 01:44	2.1
m,p-Xylene	ND		1.7	ppb v/v			09/27/17 01:44	2.1
o-Xylene	ND		0.84	ppb v/v			09/27/17 01:44	2.1
Naphthalene	ND		1.7	ppb v/v			09/27/17 01:44	2.1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	87		25	ug/m3			09/27/17 01:44	2.1
Benzene	ND		2.7	ug/m3			09/27/17 01:44	2.1
Benzyl chloride	ND		8.7	ug/m3			09/27/17 01:44	2.1
Bromodichloromethane	ND		4.2	ug/m3			09/27/17 01:44	2.1
Bromoform	ND		8.7	ug/m3			09/27/17 01:44	2.1
Bromomethane	ND *		6.5	ug/m3			09/27/17 01:44	2.1
2-Butanone (MEK)	9.4		5.0	ug/m3			09/27/17 01:44	2.1
Carbon disulfide	14		5.2	ug/m3			09/27/17 01:44	2.1
Carbon tetrachloride	ND		11	ug/m3			09/27/17 01:44	2.1
Chlorobenzene	ND		2.9	ug/m3			09/27/17 01:44	2.1
Dibromochloromethane	ND		7.2	ug/m3			09/27/17 01:44	2.1
Chloroethane	ND		4.4	ug/m3			09/27/17 01:44	2.1
Chloroform	ND		3.1	ug/m3			09/27/17 01:44	2.1
Chloromethane	ND		3.5	ug/m3			09/27/17 01:44	2.1
1,2-Dibromoethane (EDB)	ND		13	ug/m3			09/27/17 01:44	2.1
1,2-Dichlorobenzene	ND		5.1	ug/m3			09/27/17 01:44	2.1
1,3-Dichlorobenzene	ND		5.1	ug/m3			09/27/17 01:44	2.1
1,4-Dichlorobenzene	ND		5.1	ug/m3			09/27/17 01:44	2.1
Dichlorodifluoromethane	19		4.2	ug/m3			09/27/17 01:44	2.1
1,1-Dichloroethane	ND		2.5	ug/m3			09/27/17 01:44	2.1
1,2-Dichloroethane	ND		6.8	ug/m3			09/27/17 01:44	2.1
1,1-Dichloroethene	ND		6.7	ug/m3			09/27/17 01:44	2.1
cis-1,2-Dichloroethene	ND		3.3	ug/m3			09/27/17 01:44	2.1
trans-1,2-Dichloroethene	ND		3.3	ug/m3			09/27/17 01:44	2.1
1,2-Dichloropropane	ND		3.9	ug/m3			09/27/17 01:44	2.1

TestAmerica Sacramento

Client Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Client Sample ID: SVE-2-170915-RA-02

Lab Sample ID: 320-31646-2

Date Collected: 09/15/17 13:00

Matrix: Air

Date Received: 09/19/17 09:50

Sample Container: Summa Canister 1L

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		3.8	ug/m3			09/27/17 01:44	2.1
trans-1,3-Dichloropropene	ND		3.8	ug/m3			09/27/17 01:44	2.1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		5.9	ug/m3			09/27/17 01:44	2.1
Ethylbenzene	ND		3.6	ug/m3			09/27/17 01:44	2.1
4-Ethyltoluene	ND		4.1	ug/m3			09/27/17 01:44	2.1
Hexachlorobutadiene	ND		45	ug/m3			09/27/17 01:44	2.1
2-Hexanone	ND		3.4	ug/m3			09/27/17 01:44	2.1
Methylene Chloride	11		2.9	ug/m3			09/27/17 01:44	2.1
4-Methyl-2-pentanone (MIBK)	ND		3.4	ug/m3			09/27/17 01:44	2.1
Styrene	ND		3.6	ug/m3			09/27/17 01:44	2.1
1,1,2,2-Tetrachloroethane	ND		5.8	ug/m3			09/27/17 01:44	2.1
Tetrachloroethene	23		5.7	ug/m3			09/27/17 01:44	2.1
Toluene	ND		3.2	ug/m3			09/27/17 01:44	2.1
1,2,4-Trichlorobenzene	ND		31	ug/m3			09/27/17 01:44	2.1
1,1,1-Trichloroethane	ND		3.4	ug/m3			09/27/17 01:44	2.1
1,1,2-Trichloroethane	ND		4.6	ug/m3			09/27/17 01:44	2.1
Trichloroethene	32		4.5	ug/m3			09/27/17 01:44	2.1
Trichlorofluoromethane	5.9		4.7	ug/m3			09/27/17 01:44	2.1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		6.4	ug/m3			09/27/17 01:44	2.1
1,2,4-Trimethylbenzene	ND		8.3	ug/m3			09/27/17 01:44	2.1
1,3,5-Trimethylbenzene	ND		4.1	ug/m3			09/27/17 01:44	2.1
Vinyl acetate	ND		5.9	ug/m3			09/27/17 01:44	2.1
Vinyl chloride	ND		2.1	ug/m3			09/27/17 01:44	2.1
m,p-Xylene	ND		7.3	ug/m3			09/27/17 01:44	2.1
o-Xylene	ND		3.6	ug/m3			09/27/17 01:44	2.1
Naphthalene	ND		8.8	ug/m3			09/27/17 01:44	2.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130		09/27/17 01:44	2.1
1,2-Dichloroethane-d4 (Surr)	90		70 - 130		09/27/17 01:44	2.1
Toluene-d8 (Surr)	96		70 - 130		09/27/17 01:44	2.1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)	12DCE (70-130)	TOL (70-130)
320-31646-1	SVE-1-170915-RA-01	85	88	94
320-31646-2	SVE-2-170915-RA-02	88	90	96
LCS 320-186268/3	Lab Control Sample	107	93	99
LCSD 320-186268/4	Lab Control Sample Dup	110	93	98
MB 320-186268/6	Method Blank	102	89	100

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air

Lab Sample ID: MB 320-186268/6
Matrix: Air
Analysis Batch: 186268

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		5.0	ppb v/v			09/26/17 14:51	1
Benzene	ND		0.40	ppb v/v			09/26/17 14:51	1
Benzyl chloride	ND		0.80	ppb v/v			09/26/17 14:51	1
Bromodichloromethane	ND		0.30	ppb v/v			09/26/17 14:51	1
Bromoform	ND		0.40	ppb v/v			09/26/17 14:51	1
Bromomethane	ND		0.80	ppb v/v			09/26/17 14:51	1
2-Butanone (MEK)	ND		0.80	ppb v/v			09/26/17 14:51	1
Carbon disulfide	ND		0.80	ppb v/v			09/26/17 14:51	1
Carbon tetrachloride	ND		0.80	ppb v/v			09/26/17 14:51	1
Chlorobenzene	ND		0.30	ppb v/v			09/26/17 14:51	1
Dibromochloromethane	ND		0.40	ppb v/v			09/26/17 14:51	1
Chloroethane	ND		0.80	ppb v/v			09/26/17 14:51	1
Chloroform	ND		0.30	ppb v/v			09/26/17 14:51	1
Chloromethane	ND		0.80	ppb v/v			09/26/17 14:51	1
1,2-Dibromoethane (EDB)	ND		0.80	ppb v/v			09/26/17 14:51	1
1,2-Dichlorobenzene	ND		0.40	ppb v/v			09/26/17 14:51	1
1,3-Dichlorobenzene	ND		0.40	ppb v/v			09/26/17 14:51	1
1,4-Dichlorobenzene	ND		0.40	ppb v/v			09/26/17 14:51	1
Dichlorodifluoromethane	ND		0.40	ppb v/v			09/26/17 14:51	1
1,1-Dichloroethane	ND		0.30	ppb v/v			09/26/17 14:51	1
1,2-Dichloroethane	ND		0.80	ppb v/v			09/26/17 14:51	1
1,1-Dichloroethene	ND		0.80	ppb v/v			09/26/17 14:51	1
cis-1,2-Dichloroethene	ND		0.40	ppb v/v			09/26/17 14:51	1
trans-1,2-Dichloroethene	ND		0.40	ppb v/v			09/26/17 14:51	1
1,2-Dichloropropane	ND		0.40	ppb v/v			09/26/17 14:51	1
cis-1,3-Dichloropropene	ND		0.40	ppb v/v			09/26/17 14:51	1
trans-1,3-Dichloropropene	ND		0.40	ppb v/v			09/26/17 14:51	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	ppb v/v			09/26/17 14:51	1
Ethylbenzene	ND		0.40	ppb v/v			09/26/17 14:51	1
4-Ethyltoluene	ND		0.40	ppb v/v			09/26/17 14:51	1
Hexachlorobutadiene	ND		2.0	ppb v/v			09/26/17 14:51	1
2-Hexanone	ND		0.40	ppb v/v			09/26/17 14:51	1
Methylene Chloride	ND		0.40	ppb v/v			09/26/17 14:51	1
4-Methyl-2-pentanone (MIBK)	ND		0.40	ppb v/v			09/26/17 14:51	1
Styrene	ND		0.40	ppb v/v			09/26/17 14:51	1
1,1,2,2-Tetrachloroethane	ND		0.40	ppb v/v			09/26/17 14:51	1
Tetrachloroethene	ND		0.40	ppb v/v			09/26/17 14:51	1
Toluene	ND		0.40	ppb v/v			09/26/17 14:51	1
1,2,4-Trichlorobenzene	ND		2.0	ppb v/v			09/26/17 14:51	1
1,1,1-Trichloroethane	ND		0.30	ppb v/v			09/26/17 14:51	1
1,1,2-Trichloroethane	ND		0.40	ppb v/v			09/26/17 14:51	1
Trichloroethene	ND		0.40	ppb v/v			09/26/17 14:51	1
Trichlorofluoromethane	ND		0.40	ppb v/v			09/26/17 14:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	ppb v/v			09/26/17 14:51	1
1,2,4-Trimethylbenzene	ND		0.80	ppb v/v			09/26/17 14:51	1
1,3,5-Trimethylbenzene	ND		0.40	ppb v/v			09/26/17 14:51	1
Vinyl acetate	ND		0.80	ppb v/v			09/26/17 14:51	1
Vinyl chloride	ND		0.40	ppb v/v			09/26/17 14:51	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-186268/6
Matrix: Air
Analysis Batch: 186268

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	ND		0.80	ppb v/v			09/26/17 14:51	1
o-Xylene	ND		0.40	ppb v/v			09/26/17 14:51	1
Naphthalene	ND		0.80	ppb v/v			09/26/17 14:51	1
Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		12	ug/m3			09/26/17 14:51	1
Benzene	ND		1.3	ug/m3			09/26/17 14:51	1
Benzyl chloride	ND		4.1	ug/m3			09/26/17 14:51	1
Bromodichloromethane	ND		2.0	ug/m3			09/26/17 14:51	1
Bromoform	ND		4.1	ug/m3			09/26/17 14:51	1
Bromomethane	ND		3.1	ug/m3			09/26/17 14:51	1
2-Butanone (MEK)	ND		2.4	ug/m3			09/26/17 14:51	1
Carbon disulfide	ND		2.5	ug/m3			09/26/17 14:51	1
Carbon tetrachloride	ND		5.0	ug/m3			09/26/17 14:51	1
Chlorobenzene	ND		1.4	ug/m3			09/26/17 14:51	1
Dibromochloromethane	ND		3.4	ug/m3			09/26/17 14:51	1
Chloroethane	ND		2.1	ug/m3			09/26/17 14:51	1
Chloroform	ND		1.5	ug/m3			09/26/17 14:51	1
Chloromethane	ND		1.7	ug/m3			09/26/17 14:51	1
1,2-Dibromoethane (EDB)	ND		6.1	ug/m3			09/26/17 14:51	1
1,2-Dichlorobenzene	ND		2.4	ug/m3			09/26/17 14:51	1
1,3-Dichlorobenzene	ND		2.4	ug/m3			09/26/17 14:51	1
1,4-Dichlorobenzene	ND		2.4	ug/m3			09/26/17 14:51	1
Dichlorodifluoromethane	ND		2.0	ug/m3			09/26/17 14:51	1
1,1-Dichloroethane	ND		1.2	ug/m3			09/26/17 14:51	1
1,2-Dichloroethane	ND		3.2	ug/m3			09/26/17 14:51	1
1,1-Dichloroethene	ND		3.2	ug/m3			09/26/17 14:51	1
cis-1,2-Dichloroethene	ND		1.6	ug/m3			09/26/17 14:51	1
trans-1,2-Dichloroethene	ND		1.6	ug/m3			09/26/17 14:51	1
1,2-Dichloropropane	ND		1.8	ug/m3			09/26/17 14:51	1
cis-1,3-Dichloropropene	ND		1.8	ug/m3			09/26/17 14:51	1
trans-1,3-Dichloropropene	ND		1.8	ug/m3			09/26/17 14:51	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		2.8	ug/m3			09/26/17 14:51	1
Ethylbenzene	ND		1.7	ug/m3			09/26/17 14:51	1
4-Ethyltoluene	ND		2.0	ug/m3			09/26/17 14:51	1
Hexachlorobutadiene	ND		21	ug/m3			09/26/17 14:51	1
2-Hexanone	ND		1.6	ug/m3			09/26/17 14:51	1
Methylene Chloride	ND		1.4	ug/m3			09/26/17 14:51	1
4-Methyl-2-pentanone (MIBK)	ND		1.6	ug/m3			09/26/17 14:51	1
Styrene	ND		1.7	ug/m3			09/26/17 14:51	1
1,1,2,2-Tetrachloroethane	ND		2.7	ug/m3			09/26/17 14:51	1
Tetrachloroethene	ND		2.7	ug/m3			09/26/17 14:51	1
Toluene	ND		1.5	ug/m3			09/26/17 14:51	1
1,2,4-Trichlorobenzene	ND		15	ug/m3			09/26/17 14:51	1
1,1,1-Trichloroethane	ND		1.6	ug/m3			09/26/17 14:51	1
1,1,2-Trichloroethane	ND		2.2	ug/m3			09/26/17 14:51	1
Trichloroethene	ND		2.1	ug/m3			09/26/17 14:51	1
Trichlorofluoromethane	ND		2.2	ug/m3			09/26/17 14:51	1

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 320-186268/6
Matrix: Air
Analysis Batch: 186268

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.1	ug/m3			09/26/17 14:51	1
1,2,4-Trimethylbenzene	ND		3.9	ug/m3			09/26/17 14:51	1
1,3,5-Trimethylbenzene	ND		2.0	ug/m3			09/26/17 14:51	1
Vinyl acetate	ND		2.8	ug/m3			09/26/17 14:51	1
Vinyl chloride	ND		1.0	ug/m3			09/26/17 14:51	1
m,p-Xylene	ND		3.5	ug/m3			09/26/17 14:51	1
o-Xylene	ND		1.7	ug/m3			09/26/17 14:51	1
Naphthalene	ND		4.2	ug/m3			09/26/17 14:51	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130				09/26/17 14:51	1
1,2-Dichloroethane-d4 (Surr)	89		70 - 130				09/26/17 14:51	1
Toluene-d8 (Surr)	100		70 - 130				09/26/17 14:51	1

Lab Sample ID: LCS 320-186268/3
Matrix: Air
Analysis Batch: 186268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	17.5		ppb v/v		88	71 - 131
Benzene	20.0	20.5		ppb v/v		102	68 - 128
Benzyl chloride	16.0	17.2		ppb v/v		107	58 - 120
Bromodichloromethane	20.0	21.3		ppb v/v		107	65 - 130
Bromoform	20.0	20.5		ppb v/v		102	64 - 144
Bromomethane	20.0	27.1	*	ppb v/v		136	70 - 131
2-Butanone (MEK)	20.0	21.7		ppb v/v		109	71 - 131
Carbon disulfide	20.0	20.5		ppb v/v		103	63 - 123
Carbon tetrachloride	20.0	18.1		ppb v/v		91	67 - 127
Chlorobenzene	20.0	20.7		ppb v/v		103	70 - 132
Dibromochloromethane	20.0	21.4		ppb v/v		107	68 - 128
Chloroethane	20.0	22.6		ppb v/v		113	70 - 131
Chloroform	20.0	21.2		ppb v/v		106	69 - 129
Chloromethane	20.0	15.6		ppb v/v		78	67 - 127
1,2-Dibromoethane (EDB)	20.0	21.4		ppb v/v		107	68 - 131
1,2-Dichlorobenzene	20.0	19.1		ppb v/v		96	73 - 143
1,3-Dichlorobenzene	20.0	20.0		ppb v/v		100	77 - 136
1,4-Dichlorobenzene	20.0	20.1		ppb v/v		100	73 - 143
Dichlorodifluoromethane	20.0	19.0		ppb v/v		95	69 - 129
1,1-Dichloroethane	20.0	20.2		ppb v/v		101	65 - 125
1,2-Dichloroethane	20.0	20.1		ppb v/v		100	71 - 131
1,1-Dichloroethene	20.0	20.0		ppb v/v		100	53 - 128
cis-1,2-Dichloroethene	20.0	21.5		ppb v/v		108	68 - 128
trans-1,2-Dichloroethene	20.0	20.6		ppb v/v		103	70 - 130
1,2-Dichloropropane	20.0	21.5		ppb v/v		108	74 - 128
cis-1,3-Dichloropropene	20.0	21.5		ppb v/v		108	78 - 132
trans-1,3-Dichloropropene	20.0	21.4		ppb v/v		107	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	21.2		ppb v/v		106	64 - 124

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-186268/3

Matrix: Air

Analysis Batch: 186268

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	20.0	20.8		ppb v/v		104	76 - 136
4-Ethyltoluene	20.0	21.2		ppb v/v		106	62 - 136
Hexachlorobutadiene	20.0	15.5		ppb v/v		77	42 - 150
2-Hexanone	20.0	18.0		ppb v/v		90	70 - 128
Methylene Chloride	20.0	17.2		ppb v/v		86	65 - 125
4-Methyl-2-pentanone (MIBK)	20.0	16.5		ppb v/v		82	73 - 133
Styrene	20.0	20.9		ppb v/v		104	76 - 144
1,1,2,2-Tetrachloroethane	20.0	19.8		ppb v/v		99	75 - 135
Tetrachloroethene	20.0	20.6		ppb v/v		103	56 - 138
Toluene	20.0	20.5		ppb v/v		102	71 - 132
1,2,4-Trichlorobenzene	20.0	16.6		ppb v/v		83	59 - 150
1,1,1-Trichloroethane	20.0	20.7		ppb v/v		103	65 - 124
1,1,2-Trichloroethane	20.0	21.3		ppb v/v		106	71 - 131
Trichloroethene	20.0	21.7		ppb v/v		109	64 - 127
Trichlorofluoromethane	20.0	20.4		ppb v/v		102	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	21.1		ppb v/v		105	50 - 132
1,2,4-Trimethylbenzene	20.0	20.5		ppb v/v		102	61 - 145
1,3,5-Trimethylbenzene	20.0	19.6		ppb v/v		98	65 - 136
Vinyl acetate	20.0	19.1		ppb v/v		95	77 - 134
Vinyl chloride	20.0	18.3		ppb v/v		91	69 - 129
m,p-Xylene	40.0	42.2		ppb v/v		106	75 - 138
o-Xylene	20.0	20.9		ppb v/v		104	77 - 132
Naphthalene	20.0	16.1		ppb v/v		81	58 - 150

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	48	41.6		ug/m3		88	71 - 131
Benzene	64	65.4		ug/m3		102	68 - 128
Benzyl chloride	83	88.9		ug/m3		107	58 - 120
Bromodichloromethane	130	143		ug/m3		107	65 - 130
Bromoform	210	212		ug/m3		102	64 - 144
Bromomethane	78	105	*	ug/m3		136	70 - 131
2-Butanone (MEK)	59	64.0		ug/m3		109	71 - 131
Carbon disulfide	62	63.9		ug/m3		103	63 - 123
Carbon tetrachloride	130	114		ug/m3		91	67 - 127
Chlorobenzene	92	95.3		ug/m3		103	70 - 132
Dibromochloromethane	170	182		ug/m3		107	68 - 128
Chloroethane	53	59.7		ug/m3		113	70 - 131
Chloroform	98	104		ug/m3		106	69 - 129
Chloromethane	41	32.3		ug/m3		78	67 - 127
1,2-Dibromoethane (EDB)	150	165		ug/m3		107	68 - 131
1,2-Dichlorobenzene	120	115		ug/m3		96	73 - 143
1,3-Dichlorobenzene	120	120		ug/m3		100	77 - 136
1,4-Dichlorobenzene	120	121		ug/m3		100	73 - 143
Dichlorodifluoromethane	99	93.8		ug/m3		95	69 - 129
1,1-Dichloroethane	81	81.7		ug/m3		101	65 - 125
1,2-Dichloroethane	81	81.3		ug/m3		100	71 - 131
1,1-Dichloroethene	79	79.1		ug/m3		100	53 - 128

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 320-186268/3
Matrix: Air
Analysis Batch: 186268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	79	85.4		ug/m3		108	68 - 128
trans-1,2-Dichloroethene	79	81.7		ug/m3		103	70 - 130
1,2-Dichloropropane	92	99.6		ug/m3		108	74 - 128
cis-1,3-Dichloropropene	91	97.7		ug/m3		108	78 - 132
trans-1,3-Dichloropropene	91	97.3		ug/m3		107	56 - 136
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	148		ug/m3		106	64 - 124
Ethylbenzene	87	90.2		ug/m3		104	76 - 136
4-Ethyltoluene	98	104		ug/m3		106	62 - 136
Hexachlorobutadiene	210	165		ug/m3		77	42 - 150
2-Hexanone	82	73.8		ug/m3		90	70 - 128
Methylene Chloride	69	59.9		ug/m3		86	65 - 125
4-Methyl-2-pentanone (MIBK)	82	67.5		ug/m3		82	73 - 133
Styrene	85	89.0		ug/m3		104	76 - 144
1,1,2,2-Tetrachloroethane	140	136		ug/m3		99	75 - 135
Tetrachloroethene	140	140		ug/m3		103	56 - 138
Toluene	75	77.2		ug/m3		102	71 - 132
1,2,4-Trichlorobenzene	150	123		ug/m3		83	59 - 150
1,1,1-Trichloroethane	110	113		ug/m3		103	65 - 124
1,1,2-Trichloroethane	110	116		ug/m3		106	71 - 131
Trichloroethene	110	117		ug/m3		109	64 - 127
Trichlorofluoromethane	110	115		ug/m3		102	68 - 128
1,1,2-Trichloro-1,2,2-trifluoroethane	150	161		ug/m3		105	50 - 132
1,2,4-Trimethylbenzene	98	101		ug/m3		102	61 - 145
1,3,5-Trimethylbenzene	98	96.3		ug/m3		98	65 - 136
Vinyl acetate	70	67.1		ug/m3		95	77 - 134
Vinyl chloride	51	46.8		ug/m3		91	69 - 129
m,p-Xylene	170	183		ug/m3		106	75 - 138
o-Xylene	87	90.5		ug/m3		104	77 - 132
Naphthalene	100	84.6		ug/m3		81	58 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,2-Dichloroethane-d4 (Surr)	93		70 - 130
Toluene-d8 (Surr)	99		70 - 130

Lab Sample ID: LCSD 320-186268/4
Matrix: Air
Analysis Batch: 186268

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	20.0	17.0		ppb v/v		85	71 - 131	3	25
Benzene	20.0	20.3		ppb v/v		102	68 - 128	1	25
Benzyl chloride	16.0	17.1		ppb v/v		107	58 - 120	1	25
Bromodichloromethane	20.0	21.3		ppb v/v		106	65 - 130	0	25
Bromoform	20.0	20.3		ppb v/v		102	64 - 144	1	25
Bromomethane	20.0	27.3	*	ppb v/v		136	70 - 131	1	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-186268/4

Client Sample ID: Lab Control Sample Dup

Matrix: Air

Prep Type: Total/NA

Analysis Batch: 186268

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	20.0	21.8		ppb v/v		109	71 - 131	0	25
Carbon disulfide	20.0	20.5		ppb v/v		102	63 - 123	0	25
Carbon tetrachloride	20.0	18.2		ppb v/v		91	67 - 127	0	25
Chlorobenzene	20.0	20.6		ppb v/v		103	70 - 132	1	25
Dibromochloromethane	20.0	21.1		ppb v/v		105	68 - 128	2	25
Chloroethane	20.0	22.5		ppb v/v		113	70 - 131	0	25
Chloroform	20.0	21.2		ppb v/v		106	69 - 129	0	25
Chloromethane	20.0	15.7		ppb v/v		78	67 - 127	0	25
1,2-Dibromoethane (EDB)	20.0	21.0		ppb v/v		105	68 - 131	2	25
1,2-Dichlorobenzene	20.0	19.2		ppb v/v		96	73 - 143	0	25
1,3-Dichlorobenzene	20.0	20.0		ppb v/v		100	77 - 136	0	25
1,4-Dichlorobenzene	20.0	20.3		ppb v/v		101	73 - 143	1	25
Dichlorodifluoromethane	20.0	19.7		ppb v/v		98	69 - 129	4	25
1,1-Dichloroethane	20.0	20.1		ppb v/v		100	65 - 125	1	25
1,2-Dichloroethane	20.0	19.8		ppb v/v		99	71 - 131	1	25
1,1-Dichloroethene	20.0	20.0		ppb v/v		100	53 - 128	0	25
cis-1,2-Dichloroethene	20.0	21.4		ppb v/v		107	68 - 128	1	25
trans-1,2-Dichloroethene	20.0	20.5		ppb v/v		102	70 - 130	1	25
1,2-Dichloropropane	20.0	21.4		ppb v/v		107	74 - 128	1	25
cis-1,3-Dichloropropene	20.0	21.4		ppb v/v		107	78 - 132	0	25
trans-1,3-Dichloropropene	20.0	21.2		ppb v/v		106	56 - 136	1	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	20.0	21.4		ppb v/v		107	64 - 124	1	25
Ethylbenzene	20.0	20.6		ppb v/v		103	76 - 136	1	25
4-Ethyltoluene	20.0	20.9		ppb v/v		105	62 - 136	1	25
Hexachlorobutadiene	20.0	15.5		ppb v/v		78	42 - 150	0	25
2-Hexanone	20.0	17.6		ppb v/v		88	70 - 128	2	25
Methylene Chloride	20.0	17.0		ppb v/v		85	65 - 125	1	25
4-Methyl-2-pentanone (MIBK)	20.0	16.2		ppb v/v		81	73 - 133	2	25
Styrene	20.0	20.9		ppb v/v		104	76 - 144	0	25
1,1,2,2-Tetrachloroethane	20.0	19.5		ppb v/v		98	75 - 135	1	25
Tetrachloroethene	20.0	20.4		ppb v/v		102	56 - 138	1	25
Toluene	20.0	20.4		ppb v/v		102	71 - 132	0	25
1,2,4-Trichlorobenzene	20.0	16.6		ppb v/v		83	59 - 150	0	25
1,1,1-Trichloroethane	20.0	20.7		ppb v/v		104	65 - 124	0	25
1,1,2-Trichloroethane	20.0	20.9		ppb v/v		105	71 - 131	2	25
Trichloroethene	20.0	21.8		ppb v/v		109	64 - 127	0	25
Trichlorofluoromethane	20.0	20.6		ppb v/v		103	68 - 128	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	21.3		ppb v/v		106	50 - 132	1	25
1,2,4-Trimethylbenzene	20.0	20.2		ppb v/v		101	61 - 145	1	25
1,3,5-Trimethylbenzene	20.0	20.0		ppb v/v		100	65 - 136	2	25
Vinyl acetate	20.0	18.7		ppb v/v		93	77 - 134	2	25
Vinyl chloride	20.0	19.0		ppb v/v		95	69 - 129	4	25
m,p-Xylene	40.0	41.9		ppb v/v		105	75 - 138	1	25
o-Xylene	20.0	20.7		ppb v/v		103	77 - 132	1	25
Naphthalene	20.0	16.3		ppb v/v		82	58 - 150	1	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	48	40.4		ug/m3		85	71 - 131	3	25
Benzene	64	64.9		ug/m3		102	68 - 128	1	25
Benzyl chloride	83	88.3		ug/m3		107	58 - 120	1	25
Bromodichloromethane	130	142		ug/m3		106	65 - 130	0	25
Bromoform	210	210		ug/m3		102	64 - 144	1	25
Bromomethane	78	106 *		ug/m3		136	70 - 131	1	25
2-Butanone (MEK)	59	64.3		ug/m3		109	71 - 131	0	25
Carbon disulfide	62	63.8		ug/m3		102	63 - 123	0	25
Carbon tetrachloride	130	114		ug/m3		91	67 - 127	0	25
Chlorobenzene	92	94.7		ug/m3		103	70 - 132	1	25
Dibromochloromethane	170	179		ug/m3		105	68 - 128	2	25
Chloroethane	53	59.5		ug/m3		113	70 - 131	0	25
Chloroform	98	104		ug/m3		106	69 - 129	0	25
Chloromethane	41	32.4		ug/m3		78	67 - 127	0	25
1,2-Dibromoethane (EDB)	150	161		ug/m3		105	68 - 131	2	25
1,2-Dichlorobenzene	120	115		ug/m3		96	73 - 143	0	25
1,3-Dichlorobenzene	120	120		ug/m3		100	77 - 136	0	25
1,4-Dichlorobenzene	120	122		ug/m3		101	73 - 143	1	25
Dichlorodifluoromethane	99	97.3		ug/m3		98	69 - 129	4	25
1,1-Dichloroethane	81	81.3		ug/m3		100	65 - 125	1	25
1,2-Dichloroethane	81	80.3		ug/m3		99	71 - 131	1	25
1,1-Dichloroethene	79	79.3		ug/m3		100	53 - 128	0	25
cis-1,2-Dichloroethene	79	84.8		ug/m3		107	68 - 128	1	25
trans-1,2-Dichloroethene	79	81.2		ug/m3		102	70 - 130	1	25
1,2-Dichloropropane	92	99.0		ug/m3		107	74 - 128	1	25
cis-1,3-Dichloropropene	91	97.3		ug/m3		107	78 - 132	0	25
trans-1,3-Dichloropropene	91	96.1		ug/m3		106	56 - 136	1	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	140	150		ug/m3		107	64 - 124	1	25
Ethylbenzene	87	89.3		ug/m3		103	76 - 136	1	25
4-Ethyltoluene	98	103		ug/m3		105	62 - 136	1	25
Hexachlorobutadiene	210	166		ug/m3		78	42 - 150	0	25
2-Hexanone	82	72.1		ug/m3		88	70 - 128	2	25
Methylene Chloride	69	59.1		ug/m3		85	65 - 125	1	25
4-Methyl-2-pentanone (MIBK)	82	66.2		ug/m3		81	73 - 133	2	25
Styrene	85	88.8		ug/m3		104	76 - 144	0	25
1,1,2,2-Tetrachloroethane	140	134		ug/m3		98	75 - 135	1	25
Tetrachloroethene	140	138		ug/m3		102	56 - 138	1	25
Toluene	75	76.8		ug/m3		102	71 - 132	0	25
1,2,4-Trichlorobenzene	150	123		ug/m3		83	59 - 150	0	25
1,1,1-Trichloroethane	110	113		ug/m3		104	65 - 124	0	25
1,1,2-Trichloroethane	110	114		ug/m3		105	71 - 131	2	25
Trichloroethene	110	117		ug/m3		109	64 - 127	0	25
Trichlorofluoromethane	110	116		ug/m3		103	68 - 128	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	150	163		ug/m3		106	50 - 132	1	25
1,2,4-Trimethylbenzene	98	99.2		ug/m3		101	61 - 145	1	25
1,3,5-Trimethylbenzene	98	98.1		ug/m3		100	65 - 136	2	25
Vinyl acetate	70	65.7		ug/m3		93	77 - 134	2	25
Vinyl chloride	51	48.5		ug/m3		95	69 - 129	4	25
m,p-Xylene	170	182		ug/m3		105	75 - 138	1	25
o-Xylene	87	89.9		ug/m3		103	77 - 132	1	25
Naphthalene	100	85.6		ug/m3		82	58 - 150	1	25

TestAmerica Sacramento

QC Sample Results

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCSD 320-186268/4

Matrix: Air

Analysis Batch: 186268

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	110		70 - 130
1,2-Dichloroethane-d4 (Surr)	93		70 - 130
Toluene-d8 (Surr)	98		70 - 130

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Air - GC/MS VOA

Analysis Batch: 186268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-31646-1	SVE-1-170915-RA-01	Total/NA	Air	TO-15	
320-31646-2	SVE-2-170915-RA-02	Total/NA	Air	TO-15	
MB 320-186268/6	Method Blank	Total/NA	Air	TO-15	
LCS 320-186268/3	Lab Control Sample	Total/NA	Air	TO-15	
LCSD 320-186268/4	Lab Control Sample Dup	Total/NA	Air	TO-15	

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Client Sample ID: SVE-1-170915-RA-01

Lab Sample ID: 320-31646-1

Date Collected: 09/15/17 13:00

Matrix: Air

Date Received: 09/19/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		1.97	250 mL	250 mL	186268	09/27/17 07:22	AP1	TAL SAC

Client Sample ID: SVE-2-170915-RA-02

Lab Sample ID: 320-31646-2

Date Collected: 09/15/17 13:00

Matrix: Air

Date Received: 09/19/17 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		2.1	250 mL	250 mL	186268	09/27/17 01:44	AP1	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-055	12-18-17
Arizona	State Program	9	AZ0708	08-11-17 *
Arkansas DEQ	State Program	6	88-0691	06-17-18
California	State Program	9	2897	01-31-18
Colorado	State Program	8	CA00044	08-31-18
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-18
Georgia	State Program	4	N/A	01-29-18
Hawaii	State Program	9	N/A	01-29-18
Illinois	NELAP	5	200060	03-17-18
Kansas	NELAP	7	E-10375	10-31-17
L-A-B	DoD ELAP		L2468	01-20-18
Louisiana	NELAP	6	30612	06-30-18
Maine	State Program	1	CA0004	04-18-18
Michigan	State Program	5	9947	01-31-18
Nevada	State Program	9	CA00044	07-31-18
New Hampshire	NELAP	1	2997	04-18-18
New Jersey	NELAP	2	CA005	06-30-18
New York	NELAP	2	11666	04-01-18
Oregon	NELAP	10	4040	01-28-18
Pennsylvania	NELAP	3	68-01272	03-31-18
Texas	NELAP	6	T104704399	05-31-18
US Fish & Wildlife	Federal		LE148388-0	07-31-18
USDA	Federal		P330-11-00436	12-30-17
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-18
Virginia	NELAP	3	460278	03-14-18
Washington	State Program	10	C581	05-05-18
West Virginia (DW)	State Program	3	9930C	12-31-17
Wyoming	State Program	8	8TMS-L	01-29-17 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

- 1
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- 7
- 8
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- 10
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- 17

Sample Summary

Client: GHD Services Inc.
Project/Site: 088751,6714 Walker St

TestAmerica Job ID: 320-31646-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-31646-1	SVE-1-170915-RA-01	Air	09/15/17 13:00	09/19/17 09:50
320-31646-2	SVE-2-170915-RA-02	Air	09/15/17 13:00	09/19/17 09:50

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- 6
- 7
- 8
- 9
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- 13
- 14
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- 16
- 17

JOB # **320-31646**
Sample # **1**

Client/Project:		VFR ID:	
Canister Serial #:	8326	Duration:	<input type="checkbox"/> Hrs <input type="checkbox"/> Min
Cleaning Job:		Flow:	mL/min
Client ID:		Initials:	
Site Location:			

FIELD				
READING	TIME	PRESS.	DATE	INITIALS
INITIAL FIELD VACUUM				
FINAL FIELD READING				

LABORATORY				
READING	PRESS.	DATE	INITIALS	
INITIAL VACUUM CHECK (INCHES Hg)	29.8		JMT	
<input type="checkbox"/> Helium Pre-dilution - Final Pressure (INCHES Hg)				
INITIAL PRESSURE (PSIA)	12.15	09/22/17	GKI	
FINAL PRESSURE (PSIA)	23.88	09/22/17	GKI	
Pressurization Gas: <input checked="" type="checkbox"/> N2 <input type="checkbox"/> He		<input type="checkbox"/>	SCRN DIL. VS 250mLs:	
Initial Canister Dilution Factor =	1.97			

CANISTER REPRESSURIZATION					
Date	Pi (PSIA)	Pf (PSIA)	Initial DF	Initials	NEW DF
			1.97		#DIV/0!
			#DIV/0!		#DIV/0!
			#DIV/0!		#DIV/0!

Analytical Dilution Factors							
	Date	Instr.	File #				
Canister DF = 1.97	9/26/2017	MS7		X	Load DF = 2.5 LVf (mLs) 250 LVi (mLs) 100	X Bag DF = 1 BVf (mLs) 250 BVi (mLs) 250	= FINAL DF 4.913580247
Canister DF = 1.97	9/27/2017	MS7		X	Load DF = 1 LVf (mLs) 250 LVi (mLs) 250	X Bag DF = 1 BVf (mLs) 250 BVi (mLs) 250	= FINAL DF 1.965432099
Canister DF = 1.97				X	Load DF = #DIV/0! LVf (mLs) 250 LVi (mLs) 250	X Bag DF = 1 BVf (mLs) 250 BVi (mLs) 250	= FINAL DF #DIV/0!



Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 320-31646-1

Login Number: 31646
List Number: 1
Creator: Nelson, Kym D

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Certification Type TO-15 SCAN
 Date Cleaned/Batch ID 8-28-17 320-31111
 Date of QC 8/28/17
 Data File Number C:\MSDCHEM\1\DATA\170828



320-31111 Chain of Custody

MS6082810.d
CANISTER ID NUMBERS

<u>34000974 *</u>	<u>34000971</u>	
<u>34000627</u>	<u>34000898</u>	
<u>34000932</u>	<u>8326</u>	
<u>34000951</u>	<u>8562</u>	
<u>34001792</u>	<u>34000622</u>	
<u>8522</u>	<u>34001645</u>	
<u>34001967</u>	<u>34001219</u>	
<u>34000867</u>	<u>34001008</u>	

The above canisters were cleaned as a batch. This certifies this batch contains no target analyte concentration greater than or equal to the method criteria for the "Certification Type" indicated above.

"*" INDICATES THE CAN OR CANS WHICH WERE SCREENED.

[Signature]
1st level Reviewed By:

8/29/17
Date:

[Signature]
2nd level Reviewed By:

8/30/17
Date:

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-31111-1
 SDG No.: _____
 Client Sample ID: 34000974 Lab Sample ID: 320-31111-1
 Matrix: Air Lab File ID: MS6082810.D
 Analysis Method: TO-15 Date Collected: 08/28/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/29/2017 11:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 181551 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	0.62	J	5.0	0.18
107-02-8	Acrolein	ND		2.0	0.22
107-13-1	Acrylonitrile	ND		2.0	0.19
107-05-1	Allyl chloride	ND		0.80	0.11
71-43-2	Benzene	ND		0.40	0.079
100-44-7	Benzyl chloride	ND		0.80	0.16
75-27-4	Bromodichloromethane	ND		0.30	0.066
75-25-2	Bromoform	ND		0.40	0.070
74-83-9	Bromomethane	ND		0.80	0.34
106-99-0	1,3-Butadiene	ND		0.80	0.15
106-97-8	n-Butane	ND		0.40	0.15
78-93-3	2-Butanone (MEK)	ND		0.80	0.20
75-65-0	tert-Butyl alcohol (TBA)	ND		2.0	0.11
104-51-8	n-Butylbenzene	ND		0.40	0.18
135-98-8	sec-Butylbenzene	ND		0.40	0.070
98-06-6	tert-Butylbenzene	ND		0.80	0.068
75-15-0	Carbon disulfide	0.17	J	0.80	0.078
56-23-5	Carbon tetrachloride	ND		0.80	0.064
108-90-7	Chlorobenzene	ND		0.30	0.064
75-45-6	Chlorodifluoromethane	ND		0.80	0.27
75-00-3	Chloroethane	ND		0.80	0.31
67-66-3	Chloroform	ND		0.30	0.095
74-87-3	Chloromethane	ND		0.80	0.20
95-49-8	2-Chlorotoluene	ND		0.40	0.080
110-82-7	Cyclohexane	ND		0.40	0.084
124-48-1	Dibromochloromethane	ND		0.40	0.079
106-93-4	1,2-Dibromoethane (EDB)	ND		0.80	0.075
74-95-3	Dibromomethane	ND		0.40	0.057
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND		0.40	0.16
95-50-1	1,2-Dichlorobenzene	ND		0.40	0.13
541-73-1	1,3-Dichlorobenzene	ND		0.40	0.11
106-46-7	1,4-Dichlorobenzene	ND		0.40	0.15
75-71-8	Dichlorodifluoromethane	ND		0.40	0.15
75-34-3	1,1-Dichloroethane	ND		0.30	0.072
107-06-2	1,2-Dichloroethane	ND		0.80	0.088

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-31111-1
 SDG No.: _____
 Client Sample ID: 34000974 Lab Sample ID: 320-31111-1
 Matrix: Air Lab File ID: MS6082810.D
 Analysis Method: TO-15 Date Collected: 08/28/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/29/2017 11:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 181551 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		0.80	0.13
156-59-2	cis-1,2-Dichloroethene	ND		0.40	0.089
156-60-5	trans-1,2-Dichloroethene	ND		0.40	0.10
78-87-5	1,2-Dichloropropane	ND		0.40	0.24
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	0.10
10061-02-6	trans-1,3-Dichloropropene	ND		0.40	0.088
123-91-1	1,4-Dioxane	ND		0.80	0.10
141-78-6	Ethyl acetate	ND		0.30	0.18
100-41-4	Ethylbenzene	ND		0.40	0.063
622-96-8	4-Ethyltoluene	ND		0.40	0.19
142-82-5	n-Heptane	ND		0.80	0.063
87-68-3	Hexachlorobutadiene	ND		2.0	0.43
110-54-3	n-Hexane	ND		0.80	0.075
591-78-6	2-Hexanone	ND		0.40	0.087
98-82-8	Isopropylbenzene	ND		0.80	0.10
99-87-6	4-Isopropyltoluene	ND		0.80	0.12
1634-04-4	Methyl-t-Butyl Ether (MTBE)	ND		0.80	0.12
80-62-6	Methyl methacrylate	ND		0.80	0.16
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.40	0.14
75-09-2	Methylene Chloride	ND		0.40	0.072
98-83-9	alpha-Methylstyrene	ND		0.40	0.065
91-20-3	Naphthalene	ND		0.80	0.56
111-65-9	n-Octane	ND		0.40	0.055
109-66-0	n-Pentane	ND		0.80	0.26
115-07-1	Propylene	0.14	J	0.40	0.099
103-65-1	N-Propylbenzene	ND		0.40	0.059
100-42-5	Styrene	ND		0.40	0.059
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.40	0.069
127-18-4	Tetrachloroethene	ND		0.40	0.051
109-99-9	Tetrahydrofuran	0.27	J	0.80	0.21
108-88-3	Toluene	ND		0.40	0.051
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.40	0.16
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.43
71-55-6	1,1,1-Trichloroethane	ND		0.30	0.065
79-00-5	1,1,2-Trichloroethane	ND		0.40	0.067

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-31111-1
 SDG No.: _____
 Client Sample ID: 34000974 Lab Sample ID: 320-31111-1
 Matrix: Air Lab File ID: MS6082810.D
 Analysis Method: TO-15 Date Collected: 08/28/2017 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 08/29/2017 11:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-Volatiles ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 181551 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.24	J	0.40	0.11
75-69-4	Trichlorofluoromethane	ND		0.40	0.20
96-18-4	1,2,3-Trichloropropane	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	ND		0.80	0.16
108-67-8	1,3,5-Trimethylbenzene	ND		0.40	0.13
540-84-1	2,2,4-Trimethylpentane	ND		0.40	0.071
108-05-4	Vinyl acetate	ND		0.80	0.15
593-60-2	Vinyl bromide	ND		0.80	0.26
75-01-4	Vinyl chloride	ND		0.40	0.12
179601-23-1	m,p-Xylene	ND		0.80	0.10
95-47-6	o-Xylene	ND		0.40	0.054

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		70-130
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		70-130
2037-26-5	Toluene-d8 (Surr)	93		70-130

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D
 Lims ID: 320-31111-A-1
 Client ID: 34000974
 Sample Type: Client
 Inject. Date: 29-Aug-2017 11:03:30 ALS Bottle#: 7 Worklist Smp#: 10
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 320-31095-A-1
 Misc. Info.: 500 mL CAN CERT
 Operator ID: LHS Instrument ID: ATMS6
 Method: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\TO15_ATMS6.m
 Limit Group: MSA - TO15 - ICAL
 Last Update: 29-Aug-2017 12:05:58 Calib Date: 01-Aug-2017 02:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Sacramento\ChromData\ATMS6\20170801-46103.b\MS6073112.D
 Column 1 : RTX Volatiles (0.32 mm) Det: MS SCAN
 Process Host: XAWRK008

First Level Reviewer: leeh

Date: 29-Aug-2017 12:05:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	130	13.283	13.295	-0.012	98	36633	4.00	
* 2 1,4-Difluorobenzene	114	15.424	15.431	-0.007	95	135937	4.00	
* 3 Chlorobenzene-d5 (IS)	117	22.159	22.153	0.006	87	108687	4.00	
\$ 4 1,2-Dichloroethane-d4 (Sur	65	14.488	14.494	-0.006	35	52909	4.55	
\$ 5 Toluene-d8 (Surr)	100	18.880	18.874	0.006	99	81266	3.73	
\$ 6 4-Bromofluorobenzene (Surr	95	24.714	24.714	0.000	94	53861	3.10	
11 Propene	41	4.608	4.614	-0.006	64	1182	0.1371	
16 Chloromethane	50	5.198	5.198	0.000	91	1502	0.1618	
32 Acetone	43	8.374	8.307	0.067	93	10655	0.6226	
40 Carbon disulfide	76	9.767	9.773	-0.006	96	5063	0.1733	
54 Tetrahydrofuran	42	13.484	13.435	0.049	88	4053	0.2688	
65 Trichloroethene	130	16.221	16.222	-0.001	94	3617	0.2412	

Reagents:

VAMSIS20_00030

Amount Added: 50.00

Units: mL

Run Reagent

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Operator ID: LHS

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Worklist Smp#: 10

Client ID: 34000974

Purge Vol: 25.000 mL

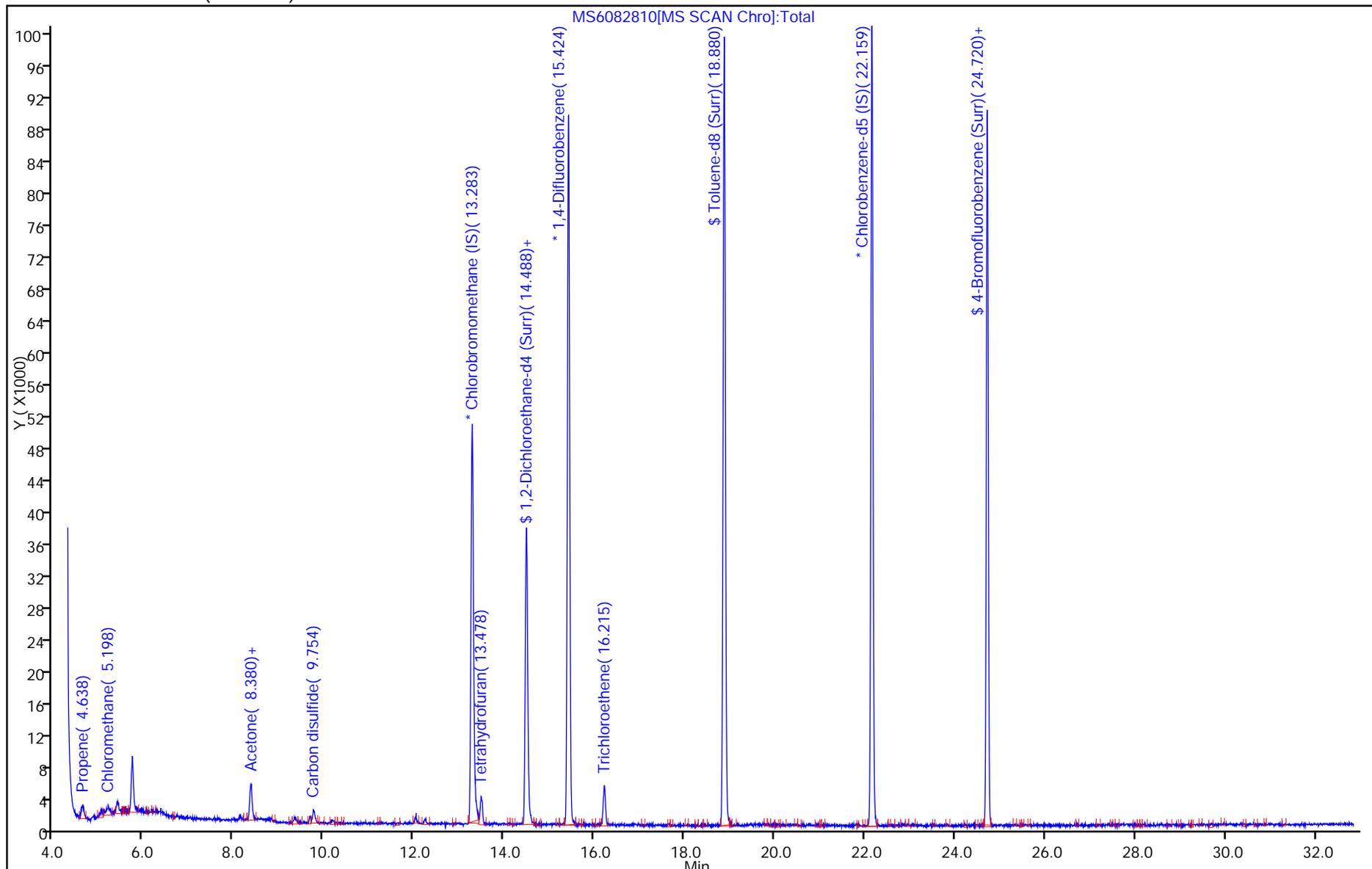
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Client ID: 34000974

Operator ID: LHS

ALS Bottle#: 7 Worklist Smp#: 10

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

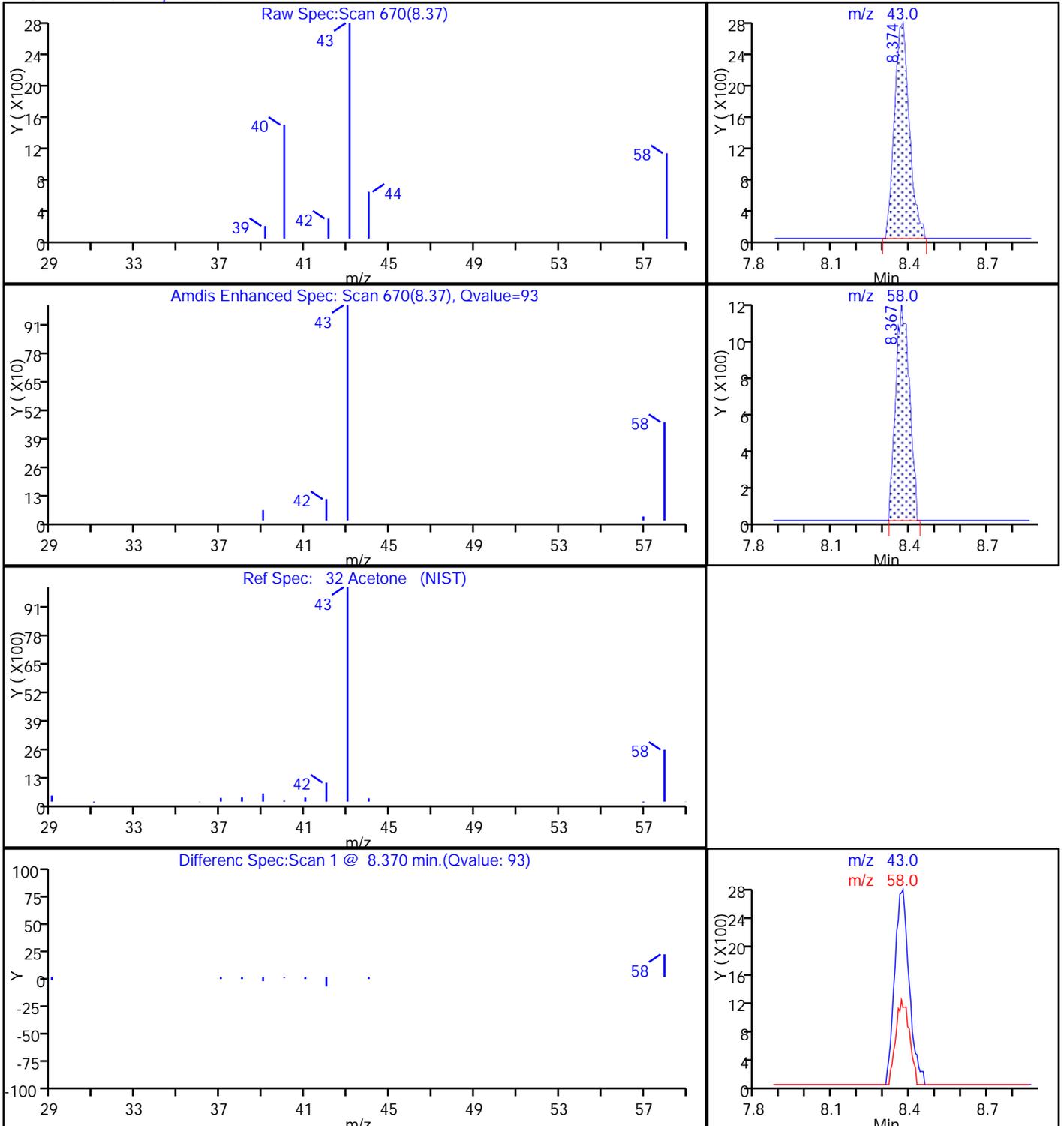
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

32 Acetone, CAS: 67-64-1



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Client ID: 34000974

Operator ID: LHS

ALS Bottle#: 7 Worklist Smp#: 10

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

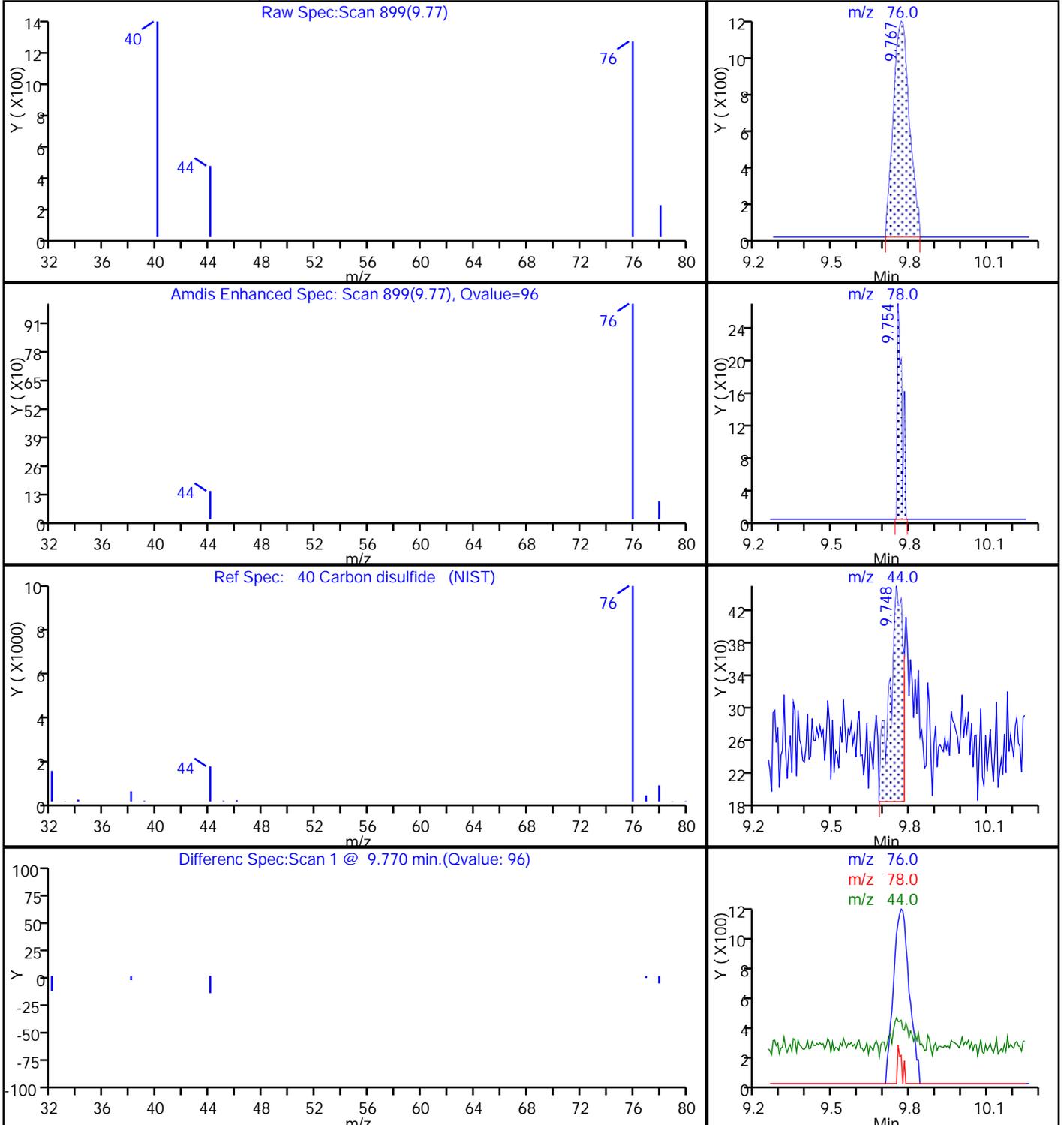
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

40 Carbon disulfide, CAS: 75-15-0



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Client ID: 34000974

Operator ID: LHS

ALS Bottle#: 7 Worklist Smp#: 10

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

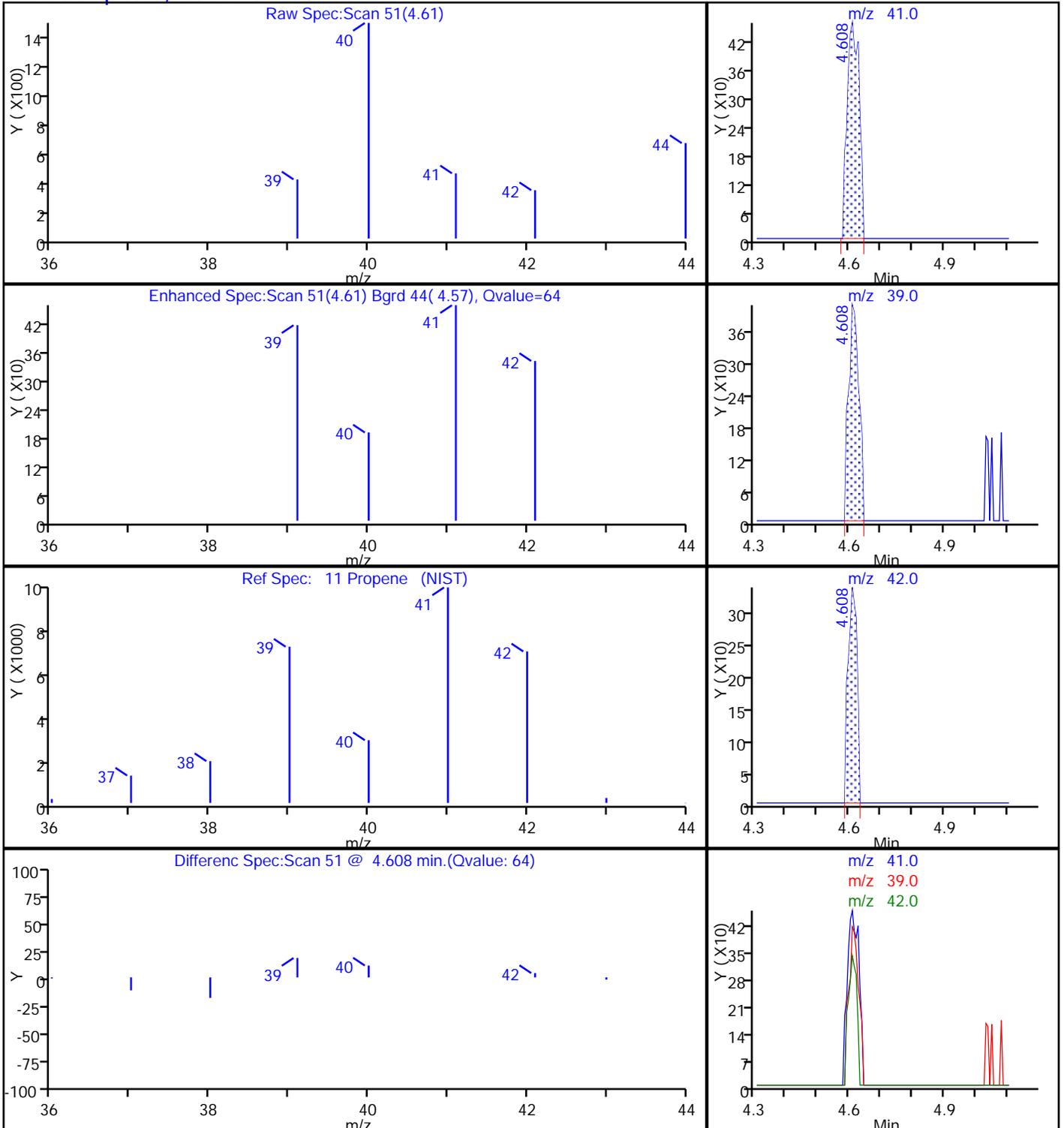
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

11 Propene, CAS: 115-07-1



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Client ID: 34000974

Operator ID: LHS

ALS Bottle#: 7 Worklist Smp#: 10

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

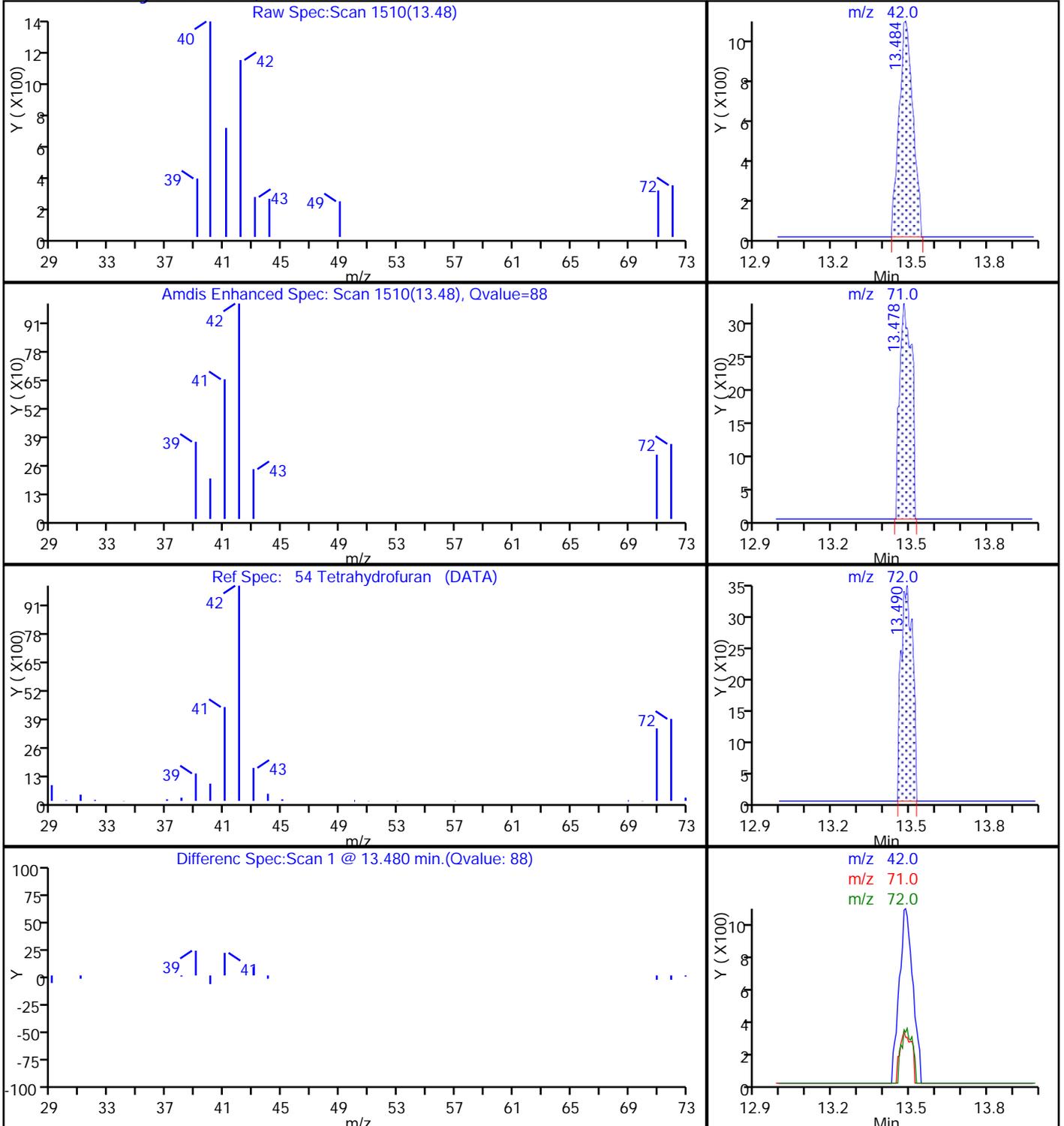
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

54 Tetrahydrofuran, CAS: 109-99-9



TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\ATMS6\20170828-47203.b\MS6082810.D

Injection Date: 29-Aug-2017 11:03:30

Instrument ID: ATMS6

Lims ID: 320-31111-A-1

Lab Sample ID: 320-31111-1

Client ID: 34000974

Operator ID: LHS

ALS Bottle#: 7 Worklist Smp#: 10

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

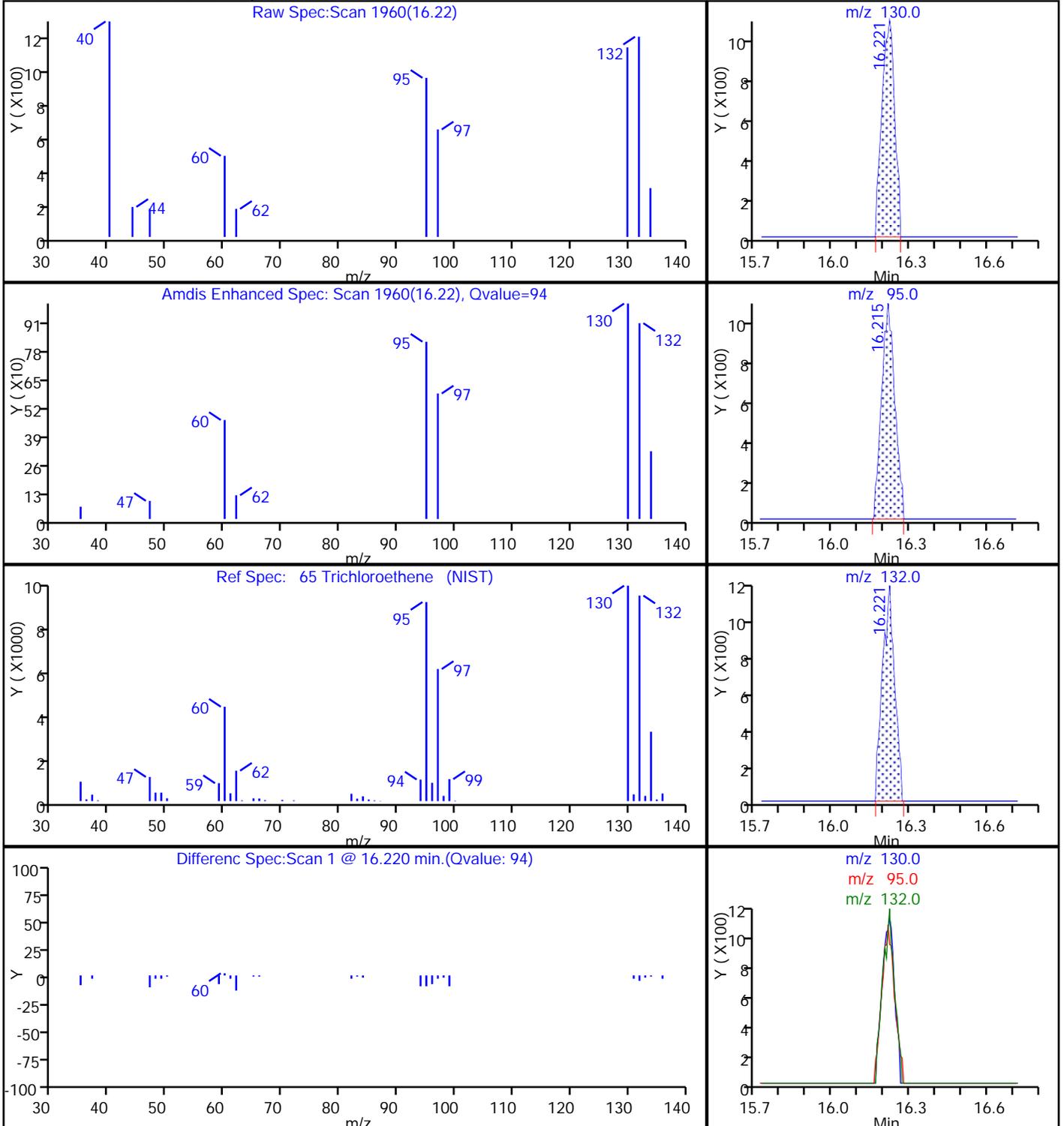
Method: TO15_ATMS6

Limit Group: MSA - TO15 - ICAL

Column: RTX Volatiles (0.32 mm)

Detector: MS SCAN

65 Trichloroethene, CAS: 79-01-6



Appendix D

Bench-Scale Testing Memorandums



December 7, 2017

Brian Sandberg
GHD Associates, Inc.
1801 Old Hwy 8 NW, Suite 114
St. Paul, MN 55112

Subject: Initial Treatability Testing Report for the St. Louis Park, Minnesota Site

Dear Brian,

ORIN Technologies, LLC. (ORIN) is pleased to submit this initial treatability report to GHD Associates, Inc. (GHD) for the site located in St. Louis Park, Minnesota (site).

Treatability Testing

Objective

The treatability study's objective is to determine the effectiveness of Bioavailable Absorbent Media (BAM) for treating groundwater at the St. Louis Park site.

Background

The primary COC at this site is PCE with average groundwater concentrations of 7,000 µg/L. The area of concern is approximately 60-ft in length by 20-ft in width with a vertical treatment extent from 40 feet below ground surface (ft bgs) to 60-ft bgs. Soils within the targeted area are poorly graded sand, medium to coarse grained, with occasional gravel layers and few interbedded silt layers. Groundwater begins at approximately 40-ft bgs.

Treatment Material

Bioavailable Absorbent Media – BAM is a sustainable, pyrolyzed, recycled cellulosic bio-mass product (>80% fixed carbon) derived from a proprietary blend of recycled organic materials with a high cation exchange and an estimated



half-life of 500 years. BAM has diverse pore sizes with a minimum total surface area of up to 1,133 square meters per gram or 127 acres/lb.

BAM has numerous synergistic qualities and is relatively affordable in large quantities for remediation purposes. BAM provides ample usable surface area for maximizing microbial colonization and thereby an active microbial community. Due to its unique 'honeycomb' structure, BAM provides increased pore space for the different strains of microbes. Most importantly, BAM's affinity for organic and inorganic compounds supports maximum contact (bio-availability through high sorbency) with microbes allowing for complete degradation.

The unique absorption capability of BAM prevents exterior surface microfilm buildup providing long term remediation capabilities. This allows BAM to absorb contaminants for more productive bio-attenuation of contaminants over a longer period. Granular Activated Carbon (GAC) primarily adsorbs contamination to the surface of the media, which then is subject to bio-film development, preventing further adsorption. As a result, BAM has been proven to supply long term maintenance free remedial abilities over GAC. Laboratory tests have also shown that BAM has a significantly higher absorptive capacity than commercially available GAC products.

Treatability Study Methodology

Four liters of site groundwater was sampled and shipped by GHD in November of 2017 to ORIN. Samples were obtained from monitoring well (MW-1A).

On November 17, 2017 three samples were pulled from the jars with the highest PID readings. One sample represented the initial control and the remaining two were utilized for treatment testing. The treated samples were dosed with 1.5% and 3.0% by weight.

Once dosed, the samples were measured for volatiles utilizing a PID and allowed to react in sealed containers. After approximately 4 hours the samples were again measured for volatiles (See Table 1 for PID results). On November 17, 2017 the control and treated samples were decanted into 40 ml preserved sample containers provided by the laboratory. Samples were sent out November 17, 2017 on-ice to a commercial analytical laboratory. Analysis of the samples was performed by Waypoint Analytical, using EPA Method 8260.



Table 1. PID Treatability Results

Sample Name	Sample Number	H2O (mL)	BAM (g)	Pre Treatment	2 minutes	240 minutes
Control	1	200	-	429	587	587
Low	2	200	1.5	600	0.2	0
High	3	200	3	528	0	0

Results

Per the analysis by Waypoint Analytical on the untreated sample from well MW-1A the groundwater initially contained 7,696.4 µg/L of chlorinated solvents. After the approximate 4 hour reaction time during the test period, contaminant concentrations were reduced greater than 99% in both treated groundwater samples.

Table 2. Groundwater Results (µg/L)

Sample Name	Chlorinated solvents (µg/L)	Percent Reduction
Control- no treatment	7,696	NA
BAM (low)	3.42	99.95%
BAM C (high)	1.11	99.98%

ORIN appreciates the opportunity to provide you these services. We look forward to helping define and develop a treatment plan for this site. If you have any questions or comments, please contact me at 608-838-6699 x100 or on my cell at 608-445-7707.

Sincerely,

Larry Kinsman
Principal
ORIN Technologies, LLC.



Disclaimer

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Memorandum

November 29, 2017
Revised February 19, 2018

To: Brian Sandberg/Tim Ree Ref. No.: 088751

From: *BS*
Sophia Dore/Ryan Thomas/adh/2 Tel: 716-205-1978

**Subject: Bench Scale Testing Results
6714 Walker Street Site
St. Louis Park, Minnesota**

1. Introduction

Chlorinated volatile organic compounds (CVOC), primarily tetrachloroethylene (PCE), are present in shallow groundwater at the Former Super Radiator Coils facility located at 6714 Walker Street in St. Louis Park, Minnesota (Site).

In situ treatment is being considered as a remediation alternative to remove PCE and VOC mass present at the Site.

Bench scale testing evaluated the potential effectiveness of in situ remedial technologies, such as in situ chemical oxidation (ISCO), in situ enhanced biodegradation (ISEB), and in situ chemical reduction (ISCR) for remediation of PCE in shallow groundwater.

2. Technology Descriptions

2.1 ISCO

ISCO is an effective method for destroying localized high concentrations of a wide range of organic compounds, particularly chlorinated ethenes. In an oxidation reaction, the oxidizing agent breaks the carbon bonds in the compounds and converts them into nonhazardous or less toxic compounds, primarily carbon dioxide and water. Commonly used oxidizing reagents include potassium permanganate (KMnO₄), Fenton's Reagent (hydrogen peroxide in a solution of ferrous salts), catalyzed sodium persulfate, and ozone.

KMnO₄, Fenton's Reagent, and catalyzed sodium persulfate are effective when delivered in an aqueous solution and react with a wide range of organic compounds. These oxidants are inexpensive and readily available in large quantities.

ISCO is Site-specific, and successful treatment is typically a function of the effectiveness of the delivery system (being able to deliver sufficient amounts of oxidant to the impacted soil and groundwater and making sufficient "contact") and subsequent transport of the oxidant within the soil and groundwater. The treatment performance is primarily dependent on the soil chemistry. A critical factor in evaluating ISCO treatment is determining the dosages of oxidant needed to effectively oxidize the hydrocarbon compounds present



(referred to as stoichiometric demand) as well as the competing reactions. Competing reactions are typically caused by the presence of natural organic materials such as humates and fulvates, as well as reduced metal species. The consumption of oxidants by these non-target compounds is defined as natural oxidant demand (NOD). In order to determine the optimum dosage, treatability studies are required. Large quantities of oxidizing chemicals require regulated handling and pose health and safety concerns. Chemical oxidation may cause mobilization of metals, possible formation of toxic by-products, heat, gas, and biological perturbation.

KMnO_4 does not exhibit a high solubility and requires a large delivery volume. Fenton's Reagent is effective for the treatment of VOC. However, the Fenton's Reagent reaction is exothermic, and the heat generated can cause volatilization of the VOC. It also requires a pH of 5-pH units and ferrous sulfate catalyst. Base catalyzed sodium persulfate can be injected at concentrations up to 30 percent. It can oxidize a wide range of organic compounds including VOC and will continue to oxidize organic material for up to a month.

2.2 ISEB

In situ biodegradation (aerobic or anaerobic) is a treatment process whereby contaminants are metabolized into less toxic or nontoxic compounds by naturally occurring microorganisms. Site conditions can be managed to enhance in situ biodegradation processes and accelerate degradation rates of Site CVOC. In this process, several techniques can be applied to enhance biodegradation of the hydrocarbons, such as:

- i) Injection of an organic substrate such as soy-lactate or hydrogen release compound (HRC) to stimulate enhanced biodegradation of certain compounds such as PCE, trichloroethene (TCE), trichloroethane (TCA), and highly chlorinated aromatic compounds under anaerobic conditions. Injection of nitrate and/or sulfate to enhance the biodegradation of hydrocarbons under anaerobic conditions by denitrification/sulfate reduction.
- ii) Nutrient supplementation with suitable sources of nitrogen and phosphorus to enhance biodegradation of contaminants by indigenous microbial population.
- iii) Bioaugmentation by injection of microbial cultures to improve the effectiveness of the microbial population in degrading the compounds of concern.

One or a combination of these techniques can be applied based on the groundwater conditions. Emulsified vegetable oil (EVO) will enhance chlorinated solvent biodegradation under anaerobic conditions. Typically, the groundwater becomes nutrient deficient during enhanced biodegradation; therefore, nutrient supplementation is considered. Bioaugmentation is used when the natural microbial population has been shown to be unable to degrade all the contaminants present or where it is considered necessary to augment the natural biodegradation process.

Anaerobic biodegradation can be enhanced by injecting a carbon source, such as EVO, nutrients, and a microbial inoculum into the soil. The EVO provides microorganisms with a suitable carbon source for anaerobic biodegradation. The inorganic nutrients provide the microorganisms with the necessary elements for growth and microbial activity. EVO injection into an aquifer can stimulate the anaerobic biodegradation of a wide variety of compounds. The EVO works in two ways; it is a carbon source for various heterotrophic bacteria in the soil, which consume any available oxygen and create the anaerobic conditions necessary for



degradation. As EVO degrades, it releases hydrogen, which is the donor substance for the degradation. EVO preparations are commercially available, easy to handle, have low viscosity, and do not affect the aquifer's permeability. An EVO injection typically last more than 2 years.

2.3 ISCR

Zero-valent iron (ZVI) can treat CVOCs in soil and groundwater. ZVI dechlorinates organic compounds by creating reducing conditions as the Fe^{2+} is oxidized to Fe^{3+} . Under these conditions, a proton can replace a chlorine atom on organic molecules. ZVI may also stimulate anaerobic biodegradation and serve as a proton donor for reductive dechlorination. ZVI dechlorinates chlorinated compounds by replacing chlorine atoms with hydrogen atoms in a process known as reductive dechlorination.

Emulsified ZVI (EZVI) was developed to remediate dense non-aqueous phase liquids (DNAPL). EZVI consists of zero-valent nanoscale iron particles in a surfactant-stabilized biodegradable oil-water emulsion. The emulsion micelles contain the iron particles surrounded by an (EVO)-liquid membrane. The potential benefits of EZVI are reduced treatment time and cost. This product is commercially available. The technology is most cost effective for treatment where DNAPL may be present.

3. Bench Scale Testing Objectives

The primary objectives of the bench scale testing were to gather the data necessary to:

- i) Determine effectiveness of chemical oxidation for the treatment of PCE in Site soil and groundwater
- ii) Assess the total oxidant demand (TOD) of the soil
- iii) Assess the potential of the chemical oxidants to solubilize metals into groundwater
- iv) Determine the most effective oxidant and dose for chemical oxidation
- v) Determine the potential of biodegradation under anaerobic conditions for treatment of PCE in Site soil and groundwater
- vi) Determine the most effective amendment(s) and doses to stimulate ISEB or ISCR

4. Sample Acquisition

The bench scale testing used representative samples of groundwater and soil collected from the Site. Ten pounds of soil and 3 gallons of groundwater were collected from the Site. Samples were shipped to the GHD laboratory in Niagara Falls, New York and received on August 25, 2017.

5. Task 1: Initial Characterization

Upon receipt by the laboratory, the groundwater and soil samples were analyzed for:

- pH



- VOCs
- Ammonia-nitrogen
- Orthophosphate-phosphorus
- Total anaerobic microbial counts
- Dehalococcoides (DHC) by polymerase chain reaction (PCR)

The analytical results characterized baseline conditions for the treatability study.

The pH of the groundwater sample was 7.78 standard units (S.U.); ammonia-nitrogen was not detected, orthophosphate-phosphorus was present at 1.88 milligrams per liter (mg/L); total anaerobic microbial counts were 1.06×10^4 colony forming units per milliliter (CFU/mL); and DHC were present. For the dissolved VOC in Jug #1, PCE was present at 12,700 micrograms per liter ($\mu\text{g/L}$), and TCE was present at 23.2 $\mu\text{g/L}$. Low concentrations of cis- and trans-1,2-dichloroethylene (1,2-DCE) were also present. For Jug #2, PCE was present at 12,800 $\mu\text{g/L}$, and TCE was present at 30.4 $\mu\text{g/L}$. Low concentrations of cis- and trans-1,2-DCE were again present. For Jug #3, PCE was present at 7,970 $\mu\text{g/L}$, and TCE was present at 64.2 $\mu\text{g/L}$. Low concentrations of cis- and trans-1,2-DCE were again present, along with DHC. These data are shown in Table 1.

The pH of the soil sample was 8.31 S.U.; ammonia-nitrogen was not detected; orthophosphate-phosphorus was present at 26 milligrams per kilogram (mg/kg); total anaerobic microbial counts were 1.36×10^4 colony forming units per gram (CFU/g); and DHC were present. PCE was present in the soil at 191 (micrograms per kilogram ($\mu\text{g/kg}$)). These data are shown in Table 2.

6. Task 2: Chemical Oxidation Microcosm Tests

A series of batch microcosm tests were performed using the soil and groundwater samples. The tests assessed the effectiveness of chemical oxidation for treatment of soil and groundwater and determined the most effective concentration of the oxidant for treatment. Groundwater from Jug #1 was used for all chemical oxidation tests due to its high concentration of PCE.

In order to determine the amount of sodium hydroxide (NaOH) required to adjust the groundwater to 11.5 S.U., the groundwater was titrated to a pH of 11.5 S.U. with NaOH. The groundwater sample required 0.25 g of NaOH per liter of groundwater to reach a pH of 11.5 S.U. In order to determine the amount of NaOH required to adjust the pH of the soil to 11.5 S.U., the soils were titrated to a pH of 11.5 S.U. with NaOH. The soil sample required 0.25 g of NaOH per kilogram of soil.

The groundwater microcosm tests consisted of placing 100 mL of groundwater in 125-mL serum bottles and mixing with 10 mL of sodium persulfate solution. The sodium persulfate solutions contained sodium persulfate at concentrations of 5 percent, 10 percent, and 15 percent. A second set of groundwater microcosm tests were set up using Regenesis proprietary product PersulfOx. The advantage of this product is that it contains sodium persulfate premixed with a catalyst. PersulfOx solutions were added to the groundwater in the same percentages as the sodium persulfate solutions. No catalyst was added to the



PersulfOx microcosms. Control tests were prepared similarly but without the use of an oxidizing agent solution. The bottles were sealed immediately to prevent the loss of chemicals by volatilization and incubated in the dark at 20°C for 3 weeks.

The soil microcosm tests consisted of placing 100 g of soil in 4-ounce (oz.) glass jars and mixing with 25 mL of catalyzed sodium persulfate solutions. The sodium persulfate solutions contained sodium persulfate at concentrations of 10 percent, 15 percent, and 30 percent. The tests received NaOH as a catalyst. NaOH was added to adjust the soil pH to 11.5, and 2 moles of NaOH was added for every mole of sodium persulfate added. A second set of soil microcosm tests were set up using PersulfOx. PersulfOx solutions were added to the soil in the same percentages as the sodium persulfate solutions. No catalyst was added to the PersulfOx microcosms. Control tests were prepared similarly but without the use of an oxidizing agent solution. The jars were sealed immediately to prevent losses of chemicals by volatilization and incubated in the dark at 20°C for 3 weeks.

The results from the analyses of groundwater microcosms that received NaOH catalyzed sodium persulfate showed cis-1,2-DCE, trans-1,2-DCE, and TCE being treated to below their analytical detection limits at all concentrations of sodium persulfate. Greater than 98 percent removal of TCE was observed at all concentrations of sodium persulfate. Treatment with 15 percent sodium persulfate resulted in the lowest concentration of PCE at 4.72 µg/L. These data are shown in Table 3.

The results from the analyses of groundwater microcosms that received PersulfOx showed cis-1,2-DCE, trans-1,2-DCE, and TCE being treated to below their analytical detection limits at all concentrations of PersulfOx. Treatment with loading rates of 8 or 12 g/L PersulfOx resulted in greater than 90 percent removal of PCE with a concentration of 209 µg/L remaining in the microcosm.

The results from the analyses of soil microcosms that received NaOH catalyzed sodium persulfate and PersulfOx showed treatment of PCE to below its analytical detection limit at all concentrations of either product. These data are shown in Tables 5 and 6.

7. Task 3: Total Oxidant Demand

The TOD of the soil samples were assessed by placing 50 g of soil in 8-oz. jars and adding 100 mL of NaOH catalyzed sodium persulfate as described above. The initial oxidant concentration in the jars was measured and recorded. The pH was monitored over the 7-day incubation period and adjusted as necessary. After 7 days, the jars were sampled again, and the residual oxidant concentrations were measured and recorded.

The assessed TOD of the sample was 54 g/kg for NaOH catalyzed sodium persulfate and 36 g/kg for PersulfOx. These data are shown in Table 7.

8. Task 4: Metals Leaching Test

In order to assess the potential for solubilization of metals as a result of the chemical oxidation treatment, metals leaching tests were conducted. The tests were conducted on soil samples in 8-oz. glass reactor jars. Fifty grams of soil were placed in a reactor, followed by 100 mL of a 1-percent (w/w) solution sodium



persulfate catalyzed by NaOH as described above. The control tests were prepared similarly by using distilled water instead of oxidizing agent. The reactors were incubated at room temperature with pH adjustment as necessary to maintain alkaline conditions. After 2 weeks, the test vials were centrifuged, and the supernatant liquid filtered using a 1.5- μm filter. The supernatant samples were analyzed for dissolved metals.

Treatment with NaOH catalyzed sodium persulfate resulted in the solubilization of a small amount of chromium. Treatment with PersulfOx did not result in the solubilization of metals. These data are shown in Table 8.

These results represent a worst case scenario because the oxidant concentrations in the tests were significantly higher than would be encountered in the field. GHD's experience with metals solubilization during chemical oxidation has been that the solubilization of metals from soil is temporary and that metals do not migrate out of the treatment area. Once the highly oxidizing conditions in the treatment area have been exhausted, the solubilized metals reprecipitate immediately.

It is expected that any metals solubilized by the proposed ISCO injection will attenuate within a year of the final ISCO injection and that metals will not be transported out of the injection area.

9. Task 5: Enhanced Biodegradation and In Situ Chemical Reduction Microcosms

Microcosms were set up to assess the potential for biodegradation of PCE under anaerobic conditions using soil and groundwater collected from the Site. Groundwater from Jug #2 was used due to its high concentration of PCE. Twenty grams of soil were placed in serum bottles along with 100 mL of groundwater.

The following treatments were performed for ISEB:

1. Soil and groundwater only (biotic control)
2. Soil, groundwater, EVO, nutrients, and yeast extract
3. Soil, groundwater, EVO, nutrients, yeast extract, and a microbial inoculum
4. Soil, groundwater, EVO, nutrients, yeast extract, a microbial inoculum, and sodiumazide (abiotic control)

The following treatments were performed for ISCR using proprietary ISCR reagents:

5. Soil, groundwater, EOS-ZVITM, nutrients, and yeast extract
6. Soil, groundwater, EHC-LTM, nutrients, and yeast extract
7. Soil, groundwater, EZVI-5TM, nutrients, and yeast extract
8. Soil, groundwater, EHCTM, nutrients, and yeast extract

All microcosms were set up under anaerobic conditions in the anaerobic hood. After 0, 4, 8, and 12 weeks, duplicate microcosms for each ISEB treatment were sacrificed and analyzed for PCE and its daughter



products in the soil and groundwater. After 0, 2, and 6 weeks, duplicate microcosms for each ISCR treatment were sacrificed and analyzed for PCE and its daughter products in the soil and groundwater. Shorter incubation times were used for ISCR than for ISEB since ISCR involves a chemical reaction with the iron which occurs more quickly than biodegradation does.

ISEB

After 4 weeks, greater than 99 percent removal of PCE was observed in microcosms that received EVO, yeast extract, and nutrients with or without a microbial inoculum. Concentrations of cis-1,2-DCE increased in both of these sets of microcosms, and concentrations of TCE increased in the microcosms that did not receive a microbial inoculum. These data are shown in Table 9.

After 8 weeks, TCE was no longer observed, and concentrations of cis-1,2-DCE decreased in the microcosms that received EVO, yeast extract, nutrients, and a microbial inoculum. A small amount of vinyl chloride was observed in microcosms that received EVO, yeast extract, and nutrients with or without a microbial inoculum. These data are shown in Table 10.

After 12 weeks, cis-1,2-DCE concentrations decreased significantly in the microcosms that received EVO, yeast extract, and nutrients with or without a microbial inoculum. Small amounts of vinyl chloride were still present; however, the ethene measured in the headspace of these microcosms shows that complete dechlorination was occurring. These data are shown in Table 11 and on Figure 1.

ISCR

After 2 weeks, 50 percent removal of PCE was observed in the EOS-ZVI™ microcosms, 86 percent removal of PCE was observed in the EHC-L™ microcosms, 96 percent removal of PCE was observed in the EZVI-5™ microcosms, and 68 percent removal of PCE was observed in the EHC™ microcosms. Increased concentration of cis-1,2-DCE were observed in the EHC-L™ and EZVI-5™ microcosms. These data are shown in Table 12.

After 6 weeks, greater than 99 percent removal of PCE was observed in the EHC-L™ and EZVI-5™ microcosms; however, elevated concentrations of cis-1,2-DCE remained in these microcosms. Vinyl chloride was also observed in the EZVI-5™ microcosms. Fifty-seven percent removal of PCE was observed in the EOS-ZVI™ microcosms, and 63 percent removal of PCE was observed in the EHC™ microcosms. Elevated concentrations of cis-1,2-DCE and vinyl chloride were not observed in these microcosms. These data are shown in Table 13.

10. Summary

Chemical Oxidation Microcosm Tests

- Both NaOH catalyzed sodium persulfate and PersulfOx were effective for treatment of CVOC in soil and groundwater; however, treatment with NaOH catalyzed sodium persulfate achieved lower concentrations of CVOC at a lower oxidant dose.
- The TOD for NaOH catalyzed sodium persulfate was 54 g/kg and for PersulfOx was 36 g/kg.



- Treatment with NaOH catalyzed sodium persulfate resulted in the solubilization of a small amount chromium. Treatment with PersulfOx did not result in metals solubilization. These results represent a worst case scenario because the oxidant concentrations in the tests were significantly higher than would be encountered in the field. GHD's experience with metals solubilization during chemical oxidation has been that the solubilization of metals from soil is temporary and that metals do not migrate out of the treatment area.

Enhanced Anaerobic Biodegradation and In Situ Chemical Reduction Microcosm Tests

- For ISEB, treatment EVO, yeast extract, and nutrients resulted in the complete dechlorination of PCE to ethene. The addition of a microbial inoculum was not required
- For ISCR, treatment with iron-containing products resulted in a reduction in the concentration of PCE; however, where PCE was reduced to low levels, the accumulation of cis-1,2-DCE and/or vinyl chloride was observed

11. Conclusion and Recommendation

The results of the ISCO testing showed that ISCO was an effective treatment for reducing the concentrations of PCE and its daughter products in the groundwater and soil. NaOH catalyzed sodium persulfate would be the recommended oxidant as it was found to be more effective than PersulfOx during the treatability study. The bench scale testing results suggest that the entire TOD for the soil would not need to be met in order for successful treatment to occur. It is calculated that meeting 75 percent of the TOD would be sufficient. Therefore, the recommended oxidant dose would be 41 g of sodium persulfate and 14 g of NaOH per kilogram of soil. This dose would be 62 pounds of sodium persulfate and 21 pounds of NaOH per cubic yard of saturated matrix.

The results of the enhanced biodegradation tests showed that PCE and its daughter products at the concentrations present would degrade under anaerobic conditions. The addition of a microbial inoculum was not required. Therefore, the recommended treatment is EVO and nutrients. 3.1 pounds of EVO, 0.09 pound of a B12 nutrient such as Accelerite, 0.04 pound of ammonium sulfate, and 0.004 pound of sodium phosphate would be required per cubic yard of saturated matrix.

For ISCR, the 6-week data showed that PCE can be degraded in a chemically reducing environment but significant concentrations of PCE and/or its daughter products remained in all microcosms. Therefore, ISCR is not recommended for this Site.

Table 1

**Initial Groundwater Sample Characterization
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameters	Units	Bulk Water Jug #1	Bulk Water Jug #2	Bulk Water Jug #3
General Chemistry				
pH	S.U.	7.78	-	-
Ammonia-Nitrogen	mg/L	ND (1)	-	-
Orthophosphate-Phosphorus	mg/L	1.88	-	-
Microbiology				
Total Anaerobic Microbial Population	CFU/mL	1.06E+04	-	-
Dehalococcoides (DHC)	Yes/No	-	-	Yes
Volatile Organic Compounds				
cis-1,2-Dichloroethene	µg/L	6.08	6.62	4.2
trans-1,2-Dichloroethene	µg/L	13.7	14.8	8.8
Tetrachloroethene	µg/L	12700	12800	7970
Trichloroethene	µg/L	23.2	30.4	64.2

Notes:

- ND (x) - Not detected at reporting limit
S.U. - Standard Units
- - Not applicable

Table 2

**Initial Soil Sample Characterization
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameters	Units	Bulk Soil
General Chemistry		
pH	S.U.	8.31
Ammonia-Nitrogen	mg/kg	ND (1)
Orthophosphate-Phosphorus	mg/kg	0.52
Microbiology		
Total Anaerobic Microbial Population	CFU/g	1.36E+04
Dehalococcoides (DHC)	Yes/No	Yes
Volatile Organic Compounds		
cis-1,2-Dichloroethene	µg/kg	ND (50)
trans-1,2-Dichloroethene	µg/kg	ND (50)
Tetrachloroethene	µg/kg	191
Trichloroethene	µg/kg	ND (50)

Notes:

ND (x) - Not detected at reporting limit
S.U. - Standard Units

Table 3

**Treatment of Groundwater with Sodium Hydroxide Catalyzed Sodium Persulfate
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	Control	5% S ₂ O ₈	10% S ₂ O ₈	15% S ₂ O ₈
Loading Rates	g/L	0.00	4.00	8.00	12.0
Volatile Organic Compounds					
cis-1,2-Dichloroethene	µg/L	4.51 / 4.81	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
trans-1,2-Dichloroethene	µg/L	8.01 / 7.89	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
Tetrachloroethene	µg/L	5240 / 5130	25.6 / 123	13.5 / 20.5	5.1 / 4.34
Trichloroethene	µg/L	20.5 / 20.7	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
Amount of NaOH Used	mL	0.00	0.100	0.100	0.100
25% NaOH added 08/30/17	mL	0.00	0.100	0.100	0.100
% Removal of cis-1,2-Dichloroethene			>78	>78	>78
% Removal of trans-1,2-Dichloroethene			>87	>87	>87
% Removal of Tetrachloroethene			98.6	99.7	99.9
% Removal of Trichloroethene			>95	>95	>95

Notes:

ND (x) - Not detected at reporting limit
x/x - Duplicate Analysis

Table 4

**Treatment of Groundwater with PersulfOx
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	Control	5% PersulfOx	10% PersulfOx	15% PersulfOx
Loading Rates	g/L	0.00	4.00	8.00	12.0
Volatile Organic Compounds					
cis-1,2-Dichloroethene	µg/L	4.51 / 4.81	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
trans-1,2-Dichloroethene	µg/L	8.01 / 7.89	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
Tetrachloroethene	µg/L	5240 / 5130	1170 / 1180	514 / 519	221 / 197
Trichloroethene	µg/L	20.5 / 20.7	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
% Removal of cis-1,2-Dichloroethene			>78	>78	>78
% Removal of trans-1,2-Dichloroethene			>87	>87	>87
% Removal of Tetrachloroethene			77.3	90.0	96.0
% Removal of Trichloroethene			>95	>95	>95

Notes:

ND (x) - Not detected at reporting limit

x/x - Duplicate Analysis

Table 5

**Treatment of Soil with Sodium Hydroxide Catalyzed Sodium Persulfate
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	Control	10% S ₂ O ₈	15% S ₂ O ₈	30% S ₂ O ₈
Loading Rates	g/kg	0.00	25.0	37.5	75.0
Volatile Organic Compounds					
cis-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
trans-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Tetrachloroethene	µg/kg	31.2 J / 57	ND (50) / 27.8 J	ND (50) / ND (50)	ND (50) / 26.9 J
Trichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Amount of NaOH Used	mL	0.00	0.100	0.100	0.100
25% NaOH added 08/30/17	mL	0.00	0.100	0.050	0.100
25% NaOH added 09/01/17	mL	0.00	0.000	0.000	0.100
25% NaOH added 09/05/17	mL	0.00	0.100	0.150	0.100
% Removal of Tetrachloroethene			>40	>43	>41

Notes:

ND (x) - Not detected at reporting limit

J - Estimated result

x/x - Duplicate Analysis

Table 6

**Treatment of Soil with PersulfOx
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	Control	10% PersulfOx	15% PersulfOx	30% PersulfOx
Loading Rates	g/kg	0.00	25.0	37.5	75.0
Volatile Organic Compounds					
cis-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)			
trans-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)			
Tetrachloroethene	µg/kg	31.2 J / 57	33.9 J / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Trichloroethene	µg/kg	ND (50) / ND (50)			
% Removal of Tetrachloroethene			>33	>43	>43

Notes:

- ND (x) - Not detected at reporting limit
- J - Estimated result
- x/x - Duplicate Analysis

Table 7

**Analysis of Soil Total Oxidant Demand
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameters	Units	Soil S₂O₈	Soil PersulfOx
Sodium Persulfate Concentration at T=0	g/L	139	-
Sodium Persulfate Concentration at T=7 days	g/L	115	-
Amount of Sodium Persulfate Consumed by TOD per kg of soil after 7 days	g/kg	54	-
Sodium PersulfOx Concentration at T=0	g/L	-	121
Sodium PersulfOx Concentration at T=7 days	g/L	-	106
Amount of Sodium PersulfOx Consumed by TOD per kg of soil after 7 days	g/kg	-	36.0
Amount of NaOH Used	mL	0.100	-
25% NaOH added	mL		

Notes:

- - Not applicable
- Total Oxidant Demand

Table 8

**Metals Leaching Tests
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameters	Units	Soil Control	Soil S ₂ O ₈	Soil PersulfOx
Aluminum	µg/L	ND (50)	ND (50)	34.3 J
Antimony	µg/L	ND (50)	ND (50)	ND (50)
Arsenic	µg/L	ND (50)	ND (50)	ND (50)
Barium	µg/L	ND (50)	ND (50)	ND (50)
Beryllium	µg/L	ND (25)	ND (25)	ND (25)
Cadmium	µg/L	ND (25)	ND (25)	ND (25)
Calcium	µg/L	15600 E	23400 E	22200 E
Chromium	µg/L	ND (25)	64.2	15.7 J
Cobalt	µg/L	ND (50)	ND (50)	ND (50)
Copper	µg/L	ND (50)	ND (50)	ND (50)
Iron	µg/L	ND (100)	ND (100)	199
Lead	µg/L	ND (50)	ND (50)	ND (50)
Magnesium	µg/L	3370	332	1180
Manganese	µg/L	ND (25)	ND (25)	ND (25)
Nickel	µg/L	ND (50)	ND (50)	ND (50)
Potassium	µg/L	1950	5500	12100 E
Selenium	µg/L	ND (100)	ND (100)	ND (100)
Silver	µg/L	ND (50)	ND (50)	ND (50)
Sodium	µg/L	5510	1530000 E	1370000 E
Thallium	µg/L	ND (100)	ND (100)	ND (100)
Vanadium	µg/L	ND (50)	44.2 J	ND (50)
Zinc	µg/L	ND (50)	ND (50)	ND (50)
Amount of 25% NaOH Added	mL	-	0.100	-
25% NaOH added	mL	-		-

Notes:

- ND (x) - Not detected at reporting limit
- J - Estimated result
- E - Results Above Calibration Range
- - Not applicable

Table 9

**Biostudy T = 4-Week Analysis
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	T=0	Soil and GW	Soil, GW, EVO, Yeast, and Nutrients	Soil, GW, EVO, Yeast, Nutrients, and Inoculum	Soil, GW, EVO, Yeast, Nutrients, Inoculum, and Azide
Volatile Organic Compounds						
1,1-Dichloroethene	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	3.15 / 3.92	3.5 / 3.49	ND (2) / ND (2)
cis-1,2-Dichloroethene	µg/L	5.34 / 5.67	5.34 / 5.87	1660 / 1640	1600 / 1590	14.8 / 13.1
trans-1,2-Dichloroethene	µg/L	8.67 / 9.13	7.69 / 8.28	8.27 / 9.21	11.8 / 12.5	7.92 / 7.66
Tetrachloroethene	µg/L	6680 / 6780	1610 / 1650	6.1 / 3.09	3.1 / 2.55	1450 / 1460
Trichloroethene	µg/L	26.3 / 27.1	21 / 20.2	3.97 / 22.2	1.72 J / 1.66 J	28.6 / 27
Vinyl Chloride	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)	6.76 / 5.88	1.16 J / 1.02 J
Soil						
Volatile Organic Compounds						
1,1-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
cis-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	368 / 607	291 / 342	ND (50) / ND (50)
trans-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Tetrachloroethene	µg/kg	1240 / 888	711 / 460	ND (50) / ND (50)	ND (50) / 28.6 J	920 / 1243
Trichloroethene	µg/kg	41.9 J / 122	ND (50) / ND (50)	60.9 / 315	ND (50) / ND (50)	ND (50) / ND (50)
Vinyl Chloride	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Overall Removal						
% Removal of cis-1,2-Dichloroethene			<1	<1	<1	<1
% Removal of trans-1,2-Dichloroethene			6.04	1.06	<1	7.33
% Removal of Tetrachloroethene			74.6	>99	>99	75.3
% Removal of Trichloroethene			43.1	<1	83.2	27.8

Notes:

- ND (x) - Not detected at reporting limit
J - Estimated result
x/x - Duplicate Analysis

Table 10

**Biostudy T = 8-Week Analysis
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	T=0	Soil and GW	Soil, GW, EVO, Yeast, and Nutrients	Soil, GW, EVO, Yeast, Nutrients, and Inoculum	Soil, GW, EVO, Yeast, Nutrients, Inoculum, and Azide
1,1-Dichloroethene	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	3.96 / 5.0	ND (2) / ND (2)	ND (2) / ND (2)
cis-1,2-Dichloroethene	µg/L	5.34 / 5.67	5.97 / 6.27	1690 / 2080	964 / 568	12.7 / 14.5
trans-1,2-Dichloroethene	µg/L	8.67 / 9.13	11.7 / 11.9	12.6 / 15.8	12.7 / 13.2	12.2 / 12.8
Tetrachloroethene	µg/L	6680 / 6780	1300 / 1270	3.49 / 3.46	ND (2) / 1.25 J	1290 / 1260
Trichloroethene	µg/L	26.3 / 27.1	14.4 / 15	ND (2) / 3.13	ND (2) / ND (2)	19.3 / 20.6
Vinyl Chloride	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	360 / 6.91	548 / 397	1.76 J / 2.37
Soil						
Volatile Organic Compounds						
1,1-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
cis-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	189 / 389	30.2 J / ND (50)	ND (50) / ND (50)
trans-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Tetrachloroethene	µg/kg	1240 / 888	227 / 219	ND (50) / ND (50)	ND (50) / ND (50)	366 / 456
Trichloroethene	µg/kg	41.9 J / 122	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Vinyl Chloride	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	64.2 / ND (50)	49 J / ND (50)	ND (50) / ND (50)
Overall Removal						
% Removal of cis-1,2-Dichloroethene			<1	<1	<1	<1
% Removal of trans-1,2-Dichloroethene			<1	<1	<1	<1
% Removal of Tetrachloroethene			80.8	>99	>99	80.3
% Removal of Trichloroethene			55.6	>82	>84	44.5

Notes:

- ND (x) - Not detected at reporting limit
 J - Estimated result
 x/x - Duplicate Analysis

Table 11

**Biostudy T = 12-Week Analysis
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota**

Parameter	Units	T=0	Soil and GW	Soil, GW, EVO, Yeast, and Nutrients	Soil, GW, EVO, Yeast, Nutrients, and Inoculum	Soil, GW, EVO, Yeast, Nutrients, Inoculum, and Azide
Volatile Organic Compounds						
1,1-Dichloroethene	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
cis-1,2-Dichloroethene	µg/L	5.34 / 5.67	5.86 / 6.12	2.66 / 3.08	3.58 / 4.68	17.3 / 14.9
trans-1,2-Dichloroethene	µg/L	8.67 / 9.13	14.2 / 13.9	7.74 / 7.24	7.09 / 9.64	13.6 / 13.6
Tetrachloroethene	µg/L	6680 / 6780	1240 / 1190	ND (2) / ND (2)	ND (2) / ND (2)	1020 / 1010
Trichloroethene	µg/L	26.3 / 27.1	14.3 / 14.3	ND (2) / ND (2)	ND (2) / ND (2)	25 / 20.5
Vinyl Chloride	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	4.24 / 5.02	ND (2) / 2.67	2.17 / ND (2)
Soil						
Volatile Organic Compounds						
1,1-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
cis-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
trans-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Tetrachloroethene	µg/kg	1240 / 888	318 / 323	ND (50) / ND (50)	ND (50) / ND (50)	775 / 720
Trichloroethene	µg/kg	41.9 J / 122	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Vinyl Chloride	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Overall Removal						
% Removal of cis-1,2-Dichloroethene			<1	22.42	11.70	<1
% Removal of trans-1,2-Dichloroethene			<1	9.31	3.53	<1
% Removal of Tetrachloroethene			81.5	>99	>99	82.8
% Removal of Trichloroethene			56.5	>84.6	>84.6	38.5

Notes:

- ND (x) - Not detected at reporting limit
J - Estimated result
x/x - Duplicate Analysis

Table 12

ZVI Biostudy T = 2-Week Analysis
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota

Parameter	Units	T=0	Soil, GW, EOS ZVI, Yeast, and Nutrients	Soil, GW, EHC-L, Yeast, and Nutrients	Soil, GW, EZVI-5, Yeast, and Nutrients	Soil, GW, EHC, Yeast, and Nutrients
Volatile Organic Compounds						
1,1-Dichloroethene	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / 2.94	ND (2) / 1.82 J	1.28 J / ND (2)
cis-1,2-Dichloroethene	µg/L	5.56 / 5.38	4.65 / 6.4	37 / 1090	448 / 916	8.44 / 6.13
trans-1,2-Dichloroethene	µg/L	12.4 / 13.4	5.16 / 6.55	7.64 / 9.03	5.84 / 5.82	6.09 / 6.14
Tetrachloroethene	µg/L	3300 / 3240	184 / 352	776 / 6.11	135 / ND (2)	624 / 670
Trichloroethene	µg/L	12.9 / 12.8	9.11 / 17.6	30 / 3.05	72.6 / 1.11 J	105 / 72.6
Vinyl Chloride	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)
Soil						
Volatile Organic Compounds						
1,1-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
cis-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / 207	67.9 / 208	72.1 / 44.7
trans-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Tetrachloroethene	µg/kg	1400 / 547	7650 / 4410	530 / ND (50)	290 / ND (50)	1840 / 1950
Trichloroethene	µg/kg	ND (50) / ND (50)	77.3 / 25.3 J	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Vinyl Chloride	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Overall Removal						
% Removal of cis-1,2-Dichloroethene			<1	<1	<1	<1
% Removal of trans-1,2-Dichloroethene			36.8	23.8	36.9	35.4
% Removal of Tetrachloroethene			49.5	>86	>96	68.1
% Removal of Trichloroethene			<1	<1	<1	<1

Notes:

- ND (x) - Not detected at reporting limit
J - Estimated result
x/x - Duplicate Analysis

Table 13

ZVI Biostudy T = 6-Week Analysis
Laboratory Treatability Study
6714 Walker Street Site
St. Louis Park, Minnesota

Parameter	Units	T=0	Soil, GW, EOS ZVI, Yeast, and Nutrients	Soil, GW, EHC-L, Yeast, and Nutrients	Soil, GW, EZVI-5, Yeast, and Nutrients	Soil, GW, EHC, Yeast, and Nutrients
Volatile Organic Compounds						
1,1-Dichloroethene	µg/L	ND (2) / ND (2)	4.06 / 5.1	2.53 / 2.41	ND (2) / ND (2)	ND (2) / ND (2)
cis-1,2-Dichloroethene	µg/L	5.56 / 5.38	25.2 / 25.2	784 / 1160	973 / 1010	9.18 / 10.9
trans-1,2-Dichloroethene	µg/L	12.4 / 13.4	2.29 / 2.36	17.1 / 6.49	8.09 / 8.47	6.26 / 3.8
Tetrachloroethene	µg/L	3300 / 3240	581 / 452	4.94 / ND (2)	ND (2) / 2.98	1000 / 1160
Trichloroethene	µg/L	12.9 / 12.8	6.1 / 6.85	2.16 / ND (2)	ND (2) / 2.61	82.2 / 86
Vinyl Chloride	µg/L	ND (2) / ND (2)	ND (2) / ND (2)	ND (2) / ND (2)	14.6 / 15.5	ND (2) / ND (2)
Soil						
Volatile Organic Compounds						
1,1-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
cis-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	88.4 / 135	202 / 154	ND (50) / ND (50)
trans-1,2-Dichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Tetrachloroethene	µg/kg	1400 / 547	3920 / 3950	ND (50) / ND (50)	ND (50) / ND (50)	860 / 814
Trichloroethene	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	25.6 / ND (50)
Vinyl Chloride	µg/kg	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)	ND (50) / ND (50)
Overall Removal						
% Removal of cis-1,2-Dichloroethene			<1	<1	<1	<1
% Removal of trans-1,2-Dichloroethene			55.2	5.77	24.1	41.1
% Removal of Tetrachloroethene			57.3	>99	>99	63.3
% Removal of Trichloroethene			33.4	59.0	57.8	<1

Notes:

ND (x) - Not detected at reporting limit

x/x - Duplicate Analysis

Appendix E

Evaluation of Remediation Alternatives Report



Evaluation of Remediation Alternatives (ERA) for PCE Contamination in Shallow Groundwater

6714 Walker Street Site
St. Louis Park, Minnesota

Daikin Applied Americas Inc. and Super Radiator Coils, LP



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Figure 1	Site Location
Figure 2	Site Plan
Figure 3	Building Layout
Figure 4	Alternative 1 – Air Sparging (AS)
Figure 5	Alternative 2 – In-Situ Chemical Oxidation (ISCO)
Figure 6	Alternative 3 – Bioavailable Absorbent Media (BAM)
Figure 7	Alternative 4 – Electrical Resistance Heating (ERH)

Table Index

Table 1	Summary of Alternatives
Table 2	Comparative Evaluation of Alternatives

Appendix Index

Appendix A	Conceptual Corrective Action Design Report (CCAD)
Appendix B	Cost Estimates



1. Introduction

On behalf of Daikin Applied Americas, Inc. (Daikin Applied) and Super Radiator Coils, LP (SRCLP), GHD Services Inc (GHD) prepared this Evaluation of Remediation Alternatives (ERA) Report to address elevated concentrations of tetrachloroethene (also known as perchloroethene or PCE) in shallow groundwater beneath the 6714 Walker Street Site (Site) in St. Louis Park, Minnesota.

1.1 Purpose of Evaluation

The purpose of this evaluation is to identify potential treatment alternatives for remediation of PCE in shallow groundwater and assess their Site-specific feasibility and effectiveness. A comparative evaluation process will be used to identify a remediation approach for meeting remediation objectives (ROs) established for groundwater.

ROs for unsaturated soil and soil gas are being addressed by a soil vapor extraction (SVE) system already in operation at the Site (see Section 2.5). Therefore, remediation of PCE impacts to unsaturated soil and soil vapor is not included in the scope of this evaluation.

1.2 Guidance Documents

GHD prepared this report in general accordance with potentially applicable requirements (see bulleted list):

- 40 CFR §300.430. Remedial Investigation/Feasibility Study and Selection of Remedy. Pub. L. 115-90 (12/08/17).
- Minnesota Pollution Control Agency, September 1998. Site Remediation Section - Draft Guidelines for Remedy Selection.
- Minnesota Pollution Control Agency, June 2003. Voluntary Investigation and Cleanup - Focused Feasibility Study (FFS). Guidance Document #16 (Version 2.0).
- Minnesota Pollution Control Agency, April 2011. Use of Petroleum Remediation Corrective Action Design Guidance in the Superfund, RCRA and Voluntary Investigation and Cleanup Programs. Policy Document c-rem3-02.
- Minnesota Pollution Control Agency, January 2011. Petroleum Remediation Program - Conceptual Corrective Action Design Report (CCAD). Guidance Document 7-02.

Based on our review of the applicable Minnesota Pollution Control Agency's (MPCA's) guidance documents, a completed CCAD report form is provided in Appendix A



2. Background

2.1 Site Location

The location of the Site is shown on Figure 1. A Site plan is shown on Figure 2.

The Site is surrounded by mixed commercial, industrial, and residential buildings. The Site building was constructed in the late 1940s and underwent expansion in the 1950s and late 1960s. The current building encompasses an area of approximately 18,000 square feet (ft²) on a 0.62 acre (27,000 ft²) property. The current building layout is shown on Figure 3.

2.2 Site History

Historic use of the Site began in 1949 as a metal fabrication operation. Manufacturing operations ended in 1998. For a period, these operations utilized a solvent degreaser. PCE was used as a solvent to clean parts. Three former degreasing units were located inside the building. Degreaser No. 1 was used from approximately the mid-1950s to the late 1960s. Degreaser No. 1 was located in the 1950s building expansion that is listed as Former Degreaser Area No. 1 (see Figure 3). Degreaser No. 1 was replaced by Degreaser No. 2 in the late 1960s when an addition was added to the building. Degreaser No. 2 was placed inside its own room within the new building addition that is listed as Former Degreaser Area No. 2 (see Figure 3). Degreaser No. 2 operated until it was replaced in approximately 1984. Degreaser No. 3 operated in the same location as Degreaser No. 2, but was installed partially below grade in a concrete vault and with a stainless-steel outer lining. Degreasing operations ceased in 1998.

GHD reviewed documents such as building and electric permits, hazardous waste manifests, and site inspection correspondence. However, the documents did not include any viable information on the handling, storage, or disposal of degreasing solvents for the 1950s and 1960s. Starting in 1973, the records show that PCE was stored outside in a 1,000 gallon above ground storage tank (AST) along the north side of the building. In 1984, a new PCE storage tank was installed, apparently with the new degreaser (No. 3), inside the building. PCE was stored inside the building in an AST located on the second floor mezzanine. The former PCE ASTs are shown on Figure 3.

After 1998, the Site was used as a food cooperative (Emergency Foodshelf Network, Inc.) until it was sold to the present owner (CPE Exchange 25246, LLC) in 2005. Currently, the building is used as a merchandise warehouse under the name of Tall Sales Company.

2.3 Environmental Investigations

The MPCA has conducted numerous investigative activities at the Site since 2009 as part of a regional study referred to as the St. Louis Park Solvent Plume Superfund site, which has been ongoing since 2007. On-site investigations were conducted in 2009, 2010, 2011, 2014, 2015, and 2016. These investigations involved passive soil gas sampling, soil vapor probe installation and sampling, and soil and groundwater sampling using direct push technology (DPT) borings.

In 2016, Daikin Applied and SRCLP conducted a Site Investigation (SI) to investigate the nature and extent of CVOCs in the glacial drift aquifer and unsaturated soils surrounding the Site. The



results of the SI were submitted to the MPCA in the SI Report (GHD, 2016¹) and are summarized in the SAI Report (GHD, 2018)².

In 2017, Daikin Applied and SRCLP conducted another investigation to delineate the suspected source of soil vapor and groundwater contamination at the Site based on the 2016 investigation results. The Source Area Investigation (SAI) included collection of a multitude of soil, soil gas, and groundwater samples. The SAI also included bench-scale testing using Site soil and groundwater to evaluate potential remediation technologies. The results of this investigation are summarized in the accompanying SAI Report (GHD, 2018), which includes this ERA Report as Appendix E.

2.4 Conceptual Site Model

The conceptual site model (CSM) is a written or illustrative understanding of the physical, chemical, and biological processes that affect contaminant transport and migration and the potential impacts to human and environmental receptors. The CSM provides the framework to evaluate site-specific exposure pathways and helps support the decision-making process for remediation. A detailed CSM is presented in Section 5.2 of the accompanying SAI Report (GHD, 2018). A summary of the CSM is provided below.

The investigative results obtained from the SI and SAI programs show a PCE source present in the approximate area where former Degreasers No. 2 and 3 operated. PCE was used as a degreaser. The soil, soil gas and groundwater data collectively confirm the source area. The soil, soil gas and groundwater data collected to date do not appear to show other sources at the Site. However, the source area is approximate.

The PCE release likely occurred at or near the floor surface where former degreasers No.2 and No. 3 (Former Degreaser Area No. 2) were located. The data show that the released PCE migrated downward through the unsaturated soil to the water table aquifer approximately 40 feet bgs. The soil underlying the former degreaser area is predominantly well graded sand with some gravel. GHD did not encounter any significant low permeable silt or clay layers in the former degreaser area that could cause PCE to accumulate or adsorb.

During the downward migration process, a portion of the PCE is attenuated as it adsorbs on the unsaturated soil particles due to surface tension and is entrapped within unsaturated soil pore spaces. Upon reaching the water table, the PCE would need to overcome hydrostatic forces to enter the water table. Once entering the water table, the PCE would continue to attenuate during its downward migration by capillary forces. Based on the data collected under the SAI, PCE appears limited to the upper part of the drift aquifer because the quantity of the PCE release was not meaningful enough to drive it into the lower portion of the glacial drift aquifer. Based on the water quality and soil concentrations, PCE migration extended approximately 20 feet below the water table. Beyond that depth, the PCE concentrations show a significant decrease with depth. There was no direct evidence of free phase PCE found in any sample collected during the investigation. However, it is possible that small droplets of PCE are trapped in the shallow soil pores in the

¹ GHD Services, Inc., Site Investigation Report, 6714 Walker Street, June 9, 2016.

² GHD Services, Inc., Source Area Investigation Report, February 19, 2018.



immediate area of the degreaser. This residual PCE in the source area explains the high levels of dissolved PCE found downgradient of the source.

The following mechanisms were identified for chemical transport:

- Volatilization of PCE from soil and groundwater into pore space (soil gas)
- Leaching of PCE from the soil into the groundwater
- Transport of dissolved PCE in groundwater via groundwater flow

No receptors are currently impacted by the PCE contamination. The potential receptors and exposure routes are:

- Inhalation of PCE volatilized from soil gas (incomplete pathway)
- Ingestion of groundwater as drinking water (incomplete pathway)
- Incidental ingestion and dermal contact of soil particulates (incomplete pathway)

2.5 Interim Remediation Measures

Based on the results of the expanded soil gas sampling program conducted in March 2016, a soil vapor extraction (SVE) Pilot Test program was conducted during the period from May 26 through June 20, 2016 to evaluate shallow soil remediation and establish a vacuum underneath the building to prevent potential vapor intrusion.

The SVE pilot test results showed a significant reduction in PCE concentrations at the end of the study. The SVE system created a vacuum directly under the concrete slab across a majority of the building. At the end of the pilot study, Daikin Applied and SRCLP decided to continue operation of the SVE system because it protects the building occupants and continues to remove CVOC mass from the unsaturated soil.

3. Components of the Evaluation

3.1 Remediation Objectives

The following remediation objectives (ROs) for PCE contamination in shallow groundwater are identified in Section 5.4 of the SAI Report (GHD, 2018):

- RO 3 – Reduce VOC concentrations in the upper portion of the glacial drift aquifer (i.e. shallow groundwater) beneath the suspected source area insofar as practicable.
- RO 4 – Establish site-specific cleanup goals for shallow groundwater, given existing upgradient groundwater contamination impacts.

3.2 Identification of Alternatives

The following alternatives are well demonstrated for remediation of CVOC contamination in groundwater and are included in this ERA Report:

- Alternative 1 – Air Sparging (AS)



- Alternative 2 – In-Situ Chemical Oxidation (ISCO)
- Alternative 3 – Bioavailable Absorbent Media (BAM)
- Alternative 4 – Electrical Resistance Heating (ERH)

A detailed presentation of each alternative is provided in Section 4.

3.3 Evaluation Criteria

3.3.1 Threshold Criteria

Every alternative must meet the threshold criterion of providing overall protection of human health and the environment.

Overall Protection of Human Health and the Environment

This criterion considers whether the remediation alternative adequately protects human health and the environment from impacts posed by the contaminants present at the Site. This may be accomplished by either eliminating, reducing, or controlling exposure. This criterion is the primary objective of remediation.

3.3.2 Balancing Criteria

Balancing criteria are used to compare the merits of one alternative against another. The balancing criteria used for this ERA are:

Long-Term Effectiveness

This criterion addresses the anticipated results of the remediation alternative in terms of the risk remaining at the Site once the remediation objectives have been met. The focus of this evaluation is the extent and effectiveness of the controls that may be required to manage the risk associated with the treatment residuals and/or untreated wastes. This criterion also assesses the degree of certainty that the alternative will prove successful.

Reduction of Toxicity, Mobility, or Volume (TMV) Through Treatment

This criterion addresses the statutory preference for selecting remediation alternatives that implement treatment technologies to permanently and significantly reduce the TMV of the hazardous contaminants. This preference is satisfied when treatment is implemented to reduce principal threats at a site through destruction of hazardous compounds, reduction in the total mass of the contaminant, irreversible reduction in contaminant mobility, or reduction in the total volume of contaminated media.

Short-Term Risk

This criterion addresses the short term impacts posed by the remediation alternatives during construction and implementation, such as adverse impacts to Site workers and/or the environment. Another factor considered under this criterion is the anticipated length of time until remediation objectives are achieved.



Implementability

This criterion addresses the technical and administrative feasibility of implementing the proposed remediation alternatives and the availability of various services and materials required during implementation.

Cost Effectiveness

This criterion identifies the capital costs of construction, including engineering fees and contingencies, and anticipated long-term costs for operation and maintenance and performance monitoring.

3.3.3 Modifying Criteria

Community Participation

This criterion assesses the degree of acceptance or opposition the affected parties may have relative to selection of a remediation alternative. This ERA Report has been prepared as part of a response in cooperation with MPCA to which the owner and occupant of the building have consented. The affected party is the current property owner and people working at the building. However, under the circumstances of this investigation, this criterion will not be carried through the evaluation process.

4. Presentation of Alternatives

4.1 Alternative 1 – Air Sparging (AS)

Description

Alternative 1 (AS) involves injecting air into the shallow groundwater and the capillary fringe to volatilize CVOCs in groundwater and saturated soils. The injection of air facilitates the mass transfer of volatilized CVOCs into the unsaturated zone. The volatilized CVOCs are then removed from the unsaturated zone by soil vapor extraction (SVE).

A general layout of Alternative 1 (AS) is shown on Figure 4. Major design assumptions associated with this remediation alternative include:

- Installation of four sparging wells
- A 25-ft radius of influence at each sparging well (placed 25 ft apart on center, for overlap)
- A sparging interval from 40 to 60 ft bgs.
- The existing SVE system cannot be used to capture volatilized CVOCs and a larger SVE blower would be required.
- Off-gas treatment of SVE emissions will not be required.

Advantages of utilizing AS for remediation of PCE at the Site include:

- It is a common, proven technology.



- It destroys PCE without creating breakdown daughter products.

Limitations associated with implementing AS include:

- Not as effective at lower CVOC concentrations (polishing treatment may be required once initial concentrations have been reduced.)
- Not effective at treating NAPLs, if present.
- Injection of air/oxygen may interrupt natural (anaerobic) degradation of CVOCs by creating an aerobic environment.
- Requires structural modification to existing building roof to support AS/SVE equipment, above/below-ground infrastructure and O&M.
- Requires long-term operation (likely 5 years or more).

Remediation progress and completion can be measured/demonstrated by comparing pre-and post-treatment concentrations of CVOCs in soil and groundwater. A post-treatment performance investigation would include VOC analysis of soil and groundwater samples collected from the suspected source area using DPT borings and groundwater samples collected from existing MW-1A.

Overall Protection of Human Health and the Environment

AS protects human health and the environment by removing PCE and other VOCs from groundwater and saturated soils and has the potential to eliminate or reduce PCE concentrations by 99.9%.

Long-Term Effectiveness

AS is a permanent remedy for removing PCE and VOCs from groundwater and saturated soils. There would be no remaining treatment residuals or untreated wastes once ROs are met and there is a moderate to high degree of certainty that remediation will prove successful.

Reduction of TMV through Treatment

AS is an active treatment technology that irreversibly reduces toxicity and volume of PCE and VOCs in groundwater and saturated soils by mass transfer, volatilization, and extraction.

Short-Term Risk

The estimated time to design, implement, operate, and monitor performance of Alternative 1 (AS) is five years. Within this timeframe, construction would take approximately two to four weeks and remediation would take at least five years.

There is potential risk of spreading contaminants if groundwater mounding occurs in the suspected source area during active treatment. Otherwise, there is a low risk of any adverse impacts to the community or Site workers during construction and remediation.



Implementability

AS is a common, proven technology and has a strong technical feasibility for implementation at the Site. However, the administrative feasibility is a concern as the building layout will limit where sparging points and conveyance piping can be installed and construction will cause disruption to the owner's business operations).

Contractors specializing in AS are regionally available to provide services at the Site and all required materials, including a sufficient power source, are readily available.

Cost Effectiveness

The estimated cost to design, implement, operate, and monitor performance of Alternative 1 (AS) is \$318,266. A detailed cost estimate is provided in Appendix B.

4.2 Alternative 2 – In-Situ Chemical Oxidation (ISCO)

Description

Alternative 2 (ISCO) involves injecting an oxidizing reagent (in solution) into the shallow groundwater and the capillary fringe to destroy CVOCs in groundwater saturated soils by breaking their carbon bonds for conversion to nonhazardous compounds (primarily carbon dioxide, chloride ions and water).

A general layout of Alternative 2 (ISCO) is shown on Figure 5. Major design assumptions associated with this remediation alternative include:

- 12-15 injection points
- A five-foot radius of influence at each injection point (placed 10 ft apart on center, with no overlap)
- An injection interval from 40 to 60 ft bgs
- A sodium persulfate loading of 8 mg/kg, per bench-scale testing results

Advantages of utilizing ISCO for remediation of PCE at the Site include:

- It can be injected using DPT borings with no permanent above/below-ground infrastructure or remediation system O&M
- It destroys PCE without creating breakdown daughter products
- It is effective at treating NAPLs, if present

Limitations associated with using ISCO include:

- It requires direct contact between the oxidizer and the contaminant in order to be effective
- It may require multiple injection events to achieve ROs
- Injection of the oxidant may interrupt natural (anaerobic) degradation of CVOCs by creating an aerobic environment



Remediation progress and completion can be measured/demonstrated by comparing pre-and post-treatment concentrations of CVOCs in soil and groundwater. A post-treatment performance investigation would include CVOC analysis of soil and groundwater samples collected from the suspected source area using DPT borings and groundwater samples collected from existing MW-1A.

Overall Protection of Human Health and the Environment

ISCO protects human health and the environment by destroying PCE and its breakdown daughter products in groundwater and saturated soils. ISCO has the potential to eliminate or reduce PCE concentrations by 99.9%.

Long-Term Effectiveness

ISCO is a permanent remedy for destroying PCE and its breakdown daughter products in groundwater and saturated soils. There are no remaining treatment residuals or untreated wastes once ROs are met and there is a moderate to high degree of certainty that remediation will prove successful.

Reduction of TMV through Treatment

ISCO is an active treatment technology that irreversibly destroys PCE and its breakdown daughter products in groundwater and saturated soils by chemical oxidation. ISCO converts PCE to nonhazardous compounds (primarily carbon dioxide, chloride ions and water) without creating breakdown daughter products.

Short-Term Risk

The estimated time to design, implement, and monitor performance of Alternative 2 (ISCO) is two years. Within this timeframe, construction would take approximately one week and remediation would take one year.

There is potential risk of impacts to Site workers during mixing of the oxidant solution, but the risk is controlled/minimized by safety protocols and training. Otherwise, there is a low risk of any adverse impacts to the environment or community during construction and remediation.

Implementability

ISCO is a common, proven technology and has a strong technical feasibility for implementation at the Site. The technical feasibility of ISCO is also supported by the successful bench-scale testing results from the SAI. There are no concerns with the administrative feasibility of implementing ISCO at the Site.

Contractors specializing in ISCO are regionally available to provide services at the Site and all required materials, including large quantities of sodium persulfate, are readily available.

Cost Effectiveness

The estimated cost to design, implement, and monitor performance of Alternative 2 (ISCO) is \$223,166. A detailed cost estimate is provided in Appendix B.



4.3 Alternative 3 – Bioavailable Absorbent Media (BAM)

Description

Alternative 3 (BAM) involves injecting a carbon source/surface material into shallow groundwater and the capillary fringe to increase CVOC absorption and maximize microbial colonization for metabolic treatment/biodegradation.

A general layout of Alternative 3 (BAM) is shown on Figure 6. Major design assumptions associated with this remediation alternative include:

- 12-15 injection points
- A five-foot radius of influence at each injection point (placed 10 ft apart on center, with no overlap)
- An injection interval from 40 to 60 ft bgs
- A BAM dose of 3% by weight, per bench-scale testing results

Advantages of utilizing BAM for remediation of PCE at the Site include:

- It can be injected using DPT borings with no permanent above/below-ground infrastructure or remediation system O&M
- It is effective at treating NAPLs, if present
- It can be used as a standalone treatment or polish treatment for other alternatives

Limitations associated with using BAM include:

- It creates breakdown daughter products of PCE (biodegradation)
- It is less effective as groundwater becomes nutrient deficient
- It may require multiple nutrient injections (organic substrate/food source) to achieve ROs

Remediation progress and completion can be measured/demonstrated by comparing pre-and post-treatment concentrations of CVOCs in soil and groundwater. A post-treatment performance investigation would include CVOC analysis of soil and groundwater samples collected from the suspected source area using DPT borings and groundwater samples collected from existing MW-1A.

Overall Protection of Human Health and the Environment

BAM protects human health and the environment by maximizing biodegradation in groundwater and saturated soils and has the potential to eliminate or reduce PCE and its breakdown daughter products concentrations by 99.9%.

Long-Term Effectiveness

BAM is a permanent remedy for maximizing biodegradation of PCE in groundwater and saturated soils. There are no remaining treatment residuals or untreated wastes once ROs are met and there is a moderate to high degree of certainty that remediation will prove successful as a standalone



treatment. There is a higher degree of certainty that BAM would prove successful as a polishing treatment.

Reduction of TMV through Treatment

BAM is an active treatment technology that irreversibly reduces toxicity, mobility, and volume of PCE and its breakdown daughter products in groundwater and saturated soils by absorption and biodegradation. Immediate absorption by the injected media reduces contaminant mobility.

Short-Term Risk

The estimated time to design, implement, and monitor performance of Alternative 3 (BAM) is six years. Within this timeframe, construction would take approximately one week and remediation would take at least six years.

There is a low risk of any adverse impacts to the environment, community, or Site workers during construction and remediation.

Implementability

BAM is a proven technology and has a strong technical feasibility for implementation at the Site. The technical feasibility of BAM is also supported by the successful bench-scale testing results from the SAI. There are no concerns with the administrative feasibility of implementing BAM at the Site.

Contractors specializing in BAM are regionally available to provide services at the Site and all required materials, including large quantities of BAM, are readily available.

Cost Effectiveness

The estimated cost to design, implement, and monitor performance of Alternative 3 (BAM) is \$197,530. A detailed cost estimate is provided in Appendix B.

4.4 Alternative 4 – Electrical Resistance Heating (ERH)

Description

Alternative 4 (ERH) involves installing electrodes into shallow groundwater and the capillary fringe to create an electrical current that heats groundwater and saturated soils by electrical resistance. The resistance heating facilitates the mass transfer of volatilized PCE and its breakdown daughter products into the unsaturated zone. The volatilized VOCs are then removed from the unsaturated zone by soil vapor extraction (SVE).

A general layout of Alternative 4 (ERH) is shown on Figure 7. Major design assumptions associated with this remediation alternative include:

- 12-15 co-located electrode and vapor recovery (CEVR) locations
- A five-foot radius of influence at each CEVR location (placed 10 ft apart on center, with no overlap)
- A treatment interval from 40 to 60 ft bgs
- 100% below-ground infrastructure



- The subcontractor will supply all equipment necessary to capture volatilized CVOCs (i.e., the existing SVE system cannot be used)
- The subcontractor will provide off-gas treatment of SVE emissions, if required

Advantages of utilizing ERH for remediation of PCE at the Site include:

- It removes PCE without creating breakdown daughter products
- It is effective at treating NAPLs, if present
- The subcontractor provides a contract option that guarantees success

Limitations associated with using ERH include:

- Significant construction and operation effort
- High costs

Remediation progress and completion can be measured/demonstrated by comparing pre-and post-treatment concentrations of CVOCs in soil and groundwater. A post-treatment performance investigation would include CVOC analysis of soil and groundwater samples collected from the suspected source area using DPT borings and groundwater samples collected from existing MW-1A.

Overall Protection of Human Health and the Environment

Alternative 4 (ERH) protects human health and the environment by removing PCE and its breakdown daughter products from groundwater and saturated soils and has the potential to eliminate CVOCs or reduce concentrations by 99.9%.

Long-Term Effectiveness

ERH is a permanent remedy for removing PCE and its breakdown daughter products from groundwater and saturated soils. There would be no remaining treatment residuals or untreated wastes once ROs are met and there is a high degree of certainty that remediation will prove successful.

Reduction of TMV through Treatment

ERH is an active treatment technology that irreversibly reduces toxicity and volume of PCE and its breakdown daughter products in groundwater and saturated soils by mass transfer, volatilization, and extraction.

Short-Term Risk

The estimated time to design, implement, operate, and monitor performance of Alternative 4 (ERH) is two years. Within this timeframe, construction would take approximately three to six months and remediation would take another three to seven months.

There is potential risk of impacts to Site workers from the use of electrical currents as part of the treatment technology, but the risk is controlled/minimized by safety protocols and training.



Otherwise, there is a low risk of any adverse impacts to the environment or community during construction and remediation.

Implementability

ERH is a proven technology and has a strong technical feasibility for implementation at the Site. However, the administrative feasibility is a concern as the building layout will limit where belowground infrastructure can be installed and construction will cause disruption to the owner's business operations.

Contractors specializing in ERH are regionally available to provide services at the Site and all required materials, including a sufficient power source, are readily available.

Cost Effectiveness

The estimated cost to design, implement, operate, and monitor performance of Alternative 4 (ERH) is \$920,812. A detailed cost estimate is provided in Appendix B.

5. Comparative Evaluation of Alternatives

5.1 Overall Protection of Human Health and the Environment

All of the alternatives would provide protection of human health and the environment.

5.2 Long-Term Effectiveness

All of the alternatives would provide long-term effectiveness and are considered permanent remedies. Alternative 4 (ERH) has the highest probability of success, as the Contractor offers a contract option that guarantees success. The remaining alternatives have a moderate to high probability of success.

5.3 Reduction of TMV through Treatment

All alternatives utilize active treatment technologies and provide irreversible treatment. Alternative 2 (ISCO) destroys contaminants to non-hazardous compounds and reduces toxicity and volume faster than any of the other alternatives.

5.4 Short-Term Risks

Alternative 3 (BAM) has low short-term risks to the environment, community, or Site workers. However, it has the slowest timeframe to achieve ROs. Alternative 2 (ISCO) has the fastest timeframe for achieving ROs and presents only a slightly higher potential risk to Site workers during mixing of the oxidant solution (but this risk is minimized by established safety protocols/training). Alternative 1 (AS) and Alternative 4 (ERH) have slight risks but longer remediation timeframes and/or construction periods compared to Alternative 2 (ISCO).



5.5 Implementability

Alternative 2 (ISCO) and Alternative 3 (BAM) the most readily implemented. Alternative 1 (AS) and Alternative 4 (ERH) have strong technical feasibility, but are less feasible from an administrative standpoint due to significant construction coordination efforts and disruption to business operations at the Site.

5.6 Cost Effectiveness

A detailed cost estimate summary is provided in Appendix B. Alternative 2 (ISCO) and Alternative 3 (BAM) are the most cost effective for achieving the ROs established for groundwater. Alternative 4 (ERH) is cost prohibitive.

6. Conclusions and Recommendations

The remediation alternatives and evaluation criteria presented in Section 4 is summarized in Table 1.

The comparative evaluation of alternatives presented Section 5 is summarized in Table 2.

6.1 Remediation Approach

Based on the comparative evaluation of alternatives presented in Section 5, Alternative 2 (ISCO) offers the most balanced approach for achieving the Site-specific ROs established for groundwater.

The significant advantages of implementing ISCO at the Site include:

- Complete destruction of PCE without creating breakdown daughter products
- Proven effectiveness based on successful bench-testing results
- Minimal, short-term disruption to property owner
- No permanent infrastructure
- No O&M
- Shortest remediation timeframe (2 years)
- Relatively low cost of implementation

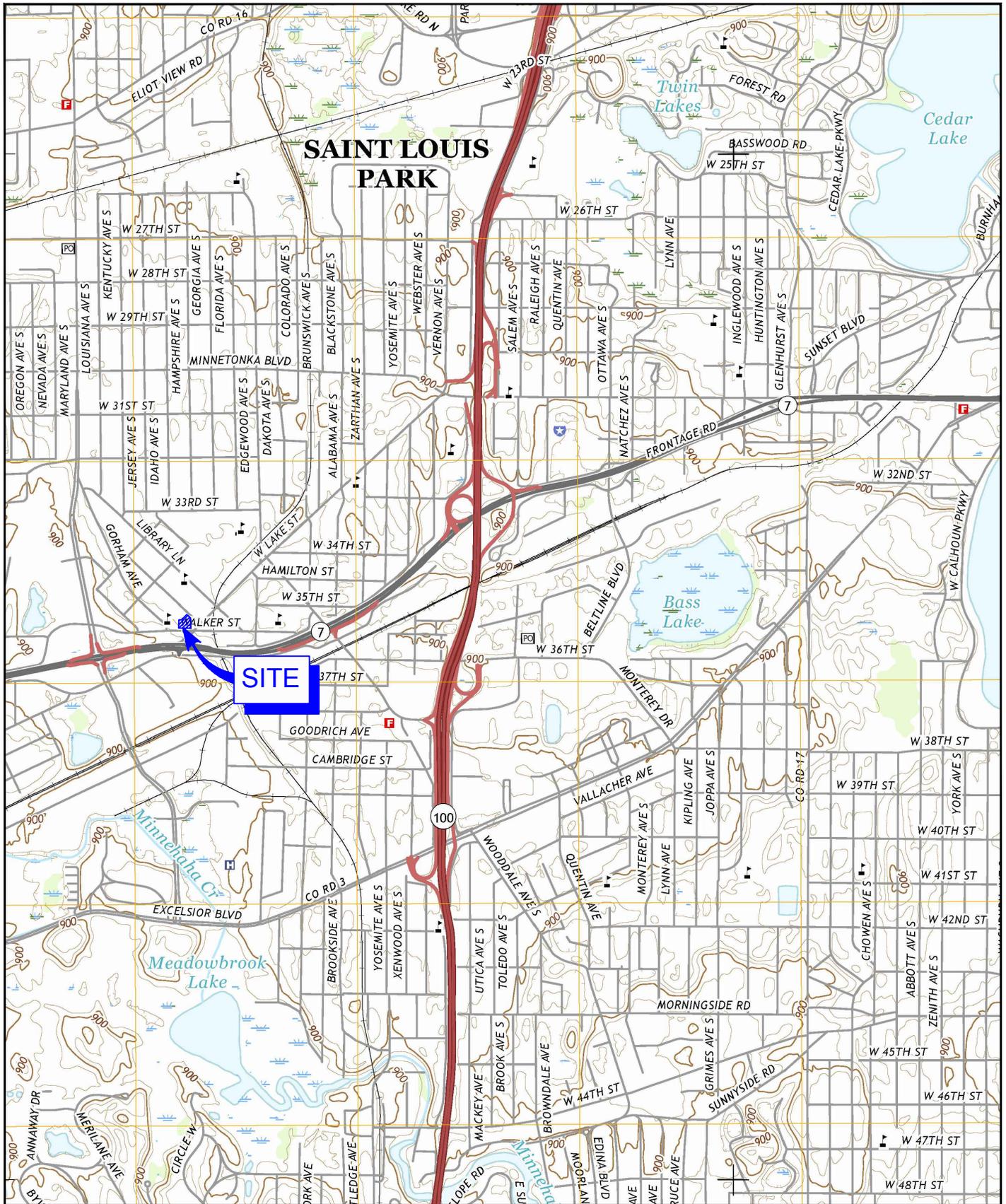
6.2 Recommendations

To further support the technical and economic feasibility of achieving the ROs established for groundwater, GHD recommends design and implementation of an ISCO pilot test in the suspected source area. The pilot test will provide verification of the major design assumptions (radius of influence, oxidant dosage, etc.) needed to demonstrate the implementability and effectiveness of ISCO in reducing PCE concentrations at the Site.

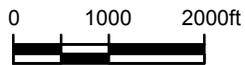


GHD will begin developing a pilot test work plan for ISCO following the MPCA's review of this ERA Report and approval to proceed. The anticipated submittal date of the ISCO Pilot Test Work Plan is 45 days following receipt of MPCA's approval to proceed.

Figures



Source: USGS UADRANGLE MAP: MINNEAPOLIS SOUTH, MN. (2016).

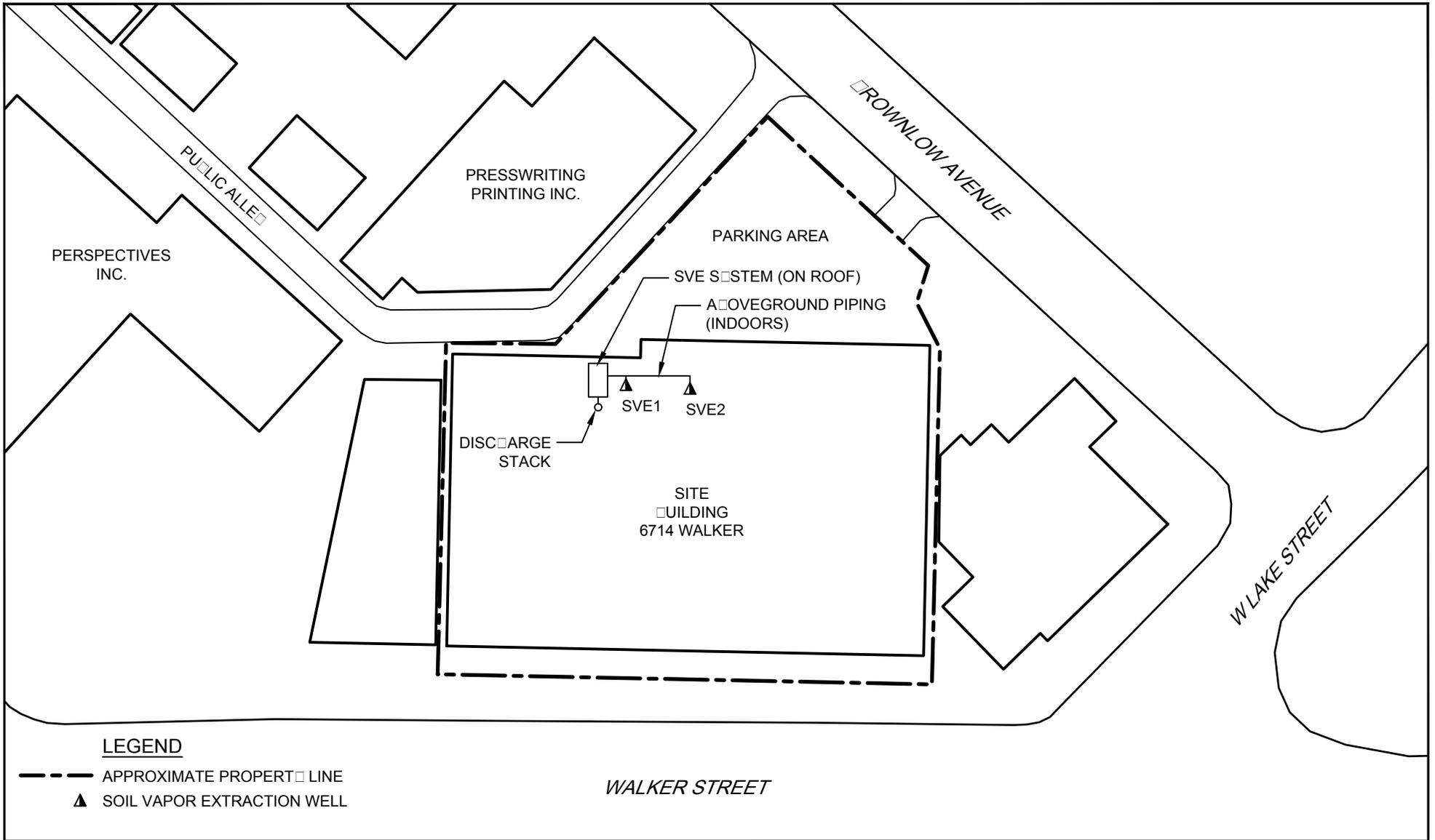


6714 WALKER STREET
ST. LOUIS PARK, MINNESOTA

88751-42
Dec 7, 2017

SITE LOCATION

FIGURE 1



Source: Microsoft Product Screen Shot(s) Reprinted with permission from Microsoft Corporation, Acquisition Date Aug 2014 - Sep 2014, Accessed: 2016



Coordinate System:
STATE PLANE MINNESOTA
SOUTH NAD83

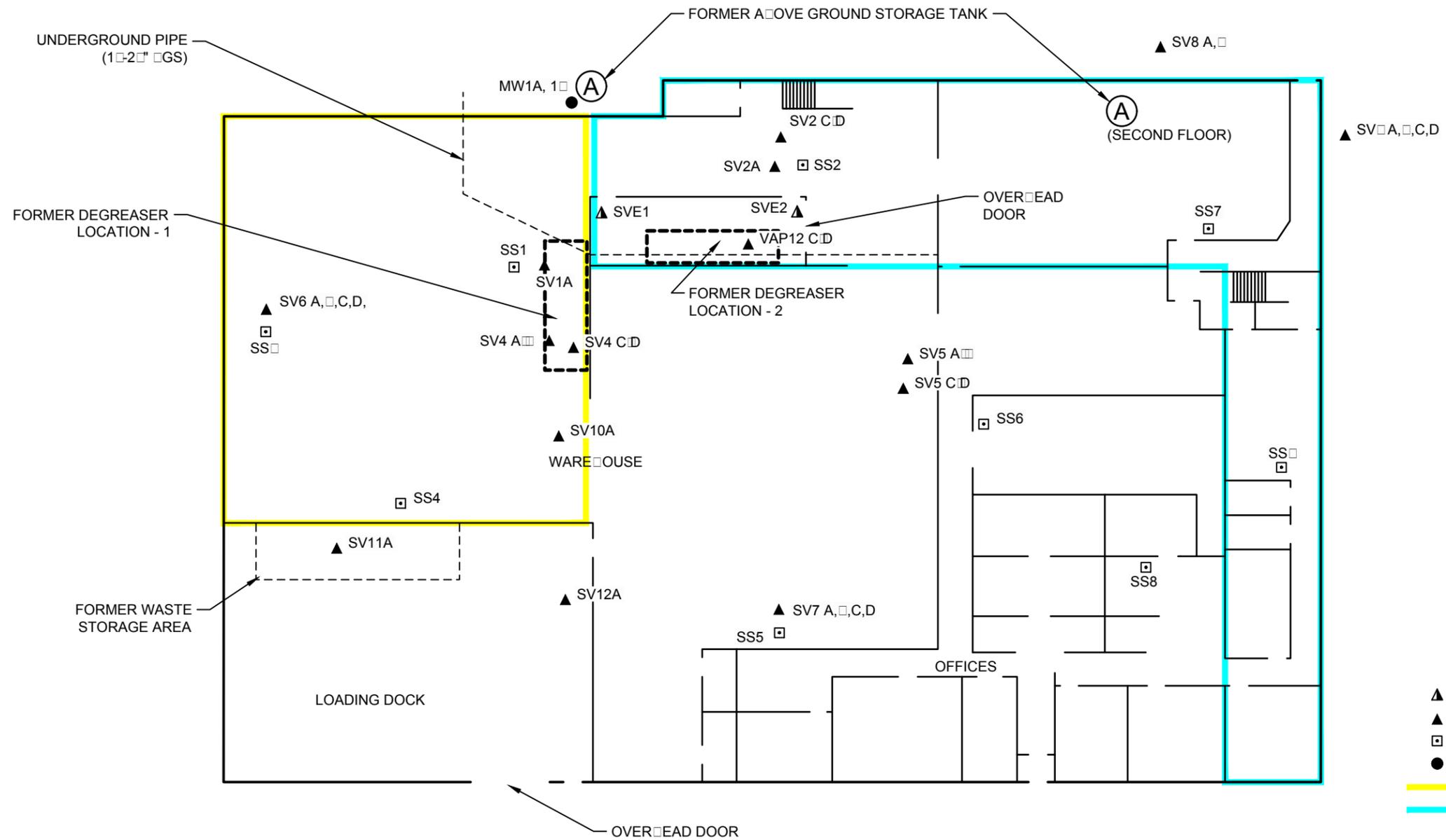


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SITE PLAN

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FIGURE 2



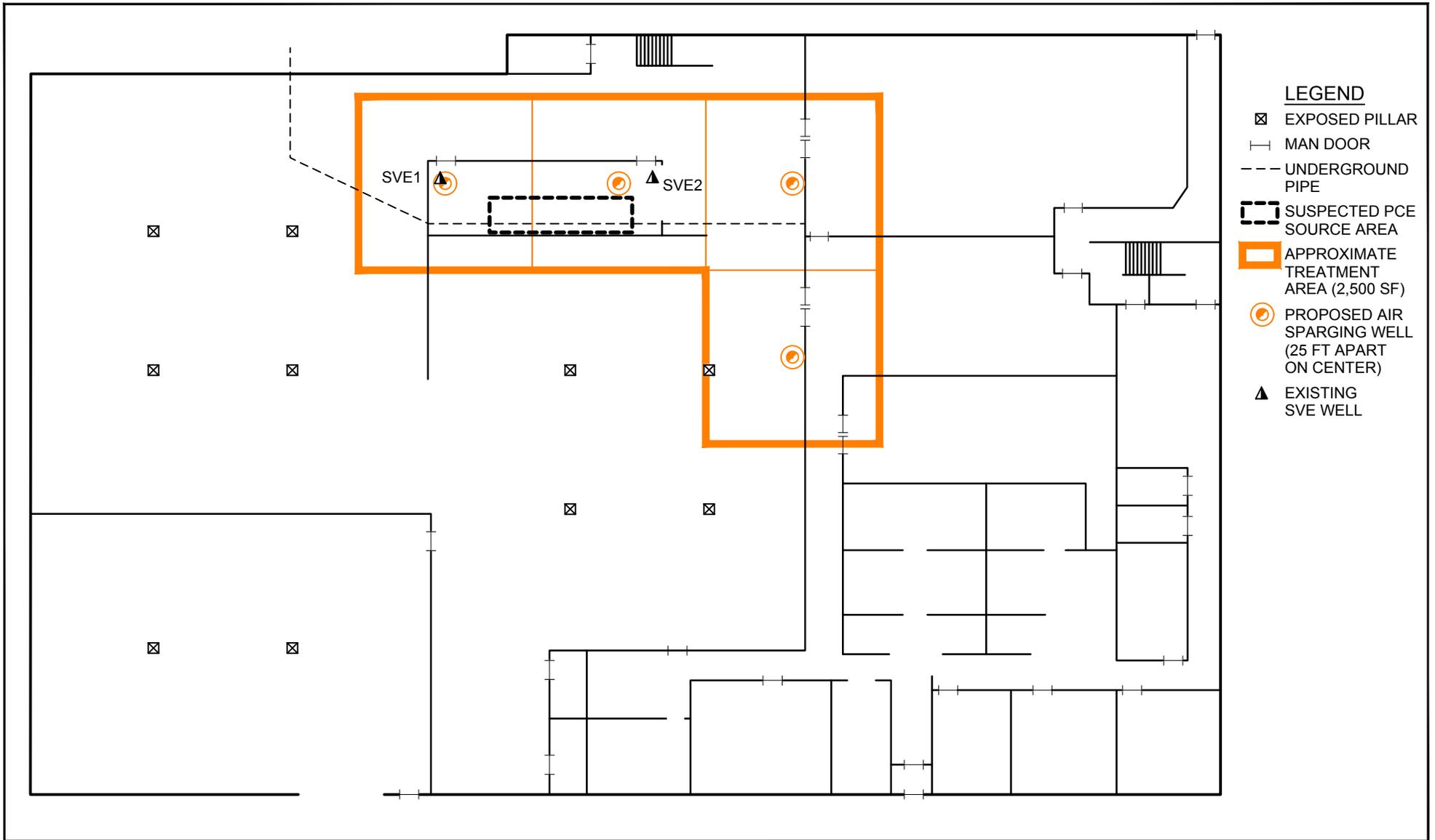
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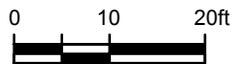
BUILDING LAYOUT

FIGURE 1



LEGEND

- ⊠ EXPOSED PILLAR
- |—| MAN DOOR
- - - UNDERGROUND PIPE
- ⊠ SUSPECTED PCE SOURCE AREA
- ▭ APPROXIMATE TREATMENT AREA (2,500 SF)
- ⊙ PROPOSED AIR SPARGING WELL (25 FT APART ON CENTER)
- ▲ EXISTING SVE WELL

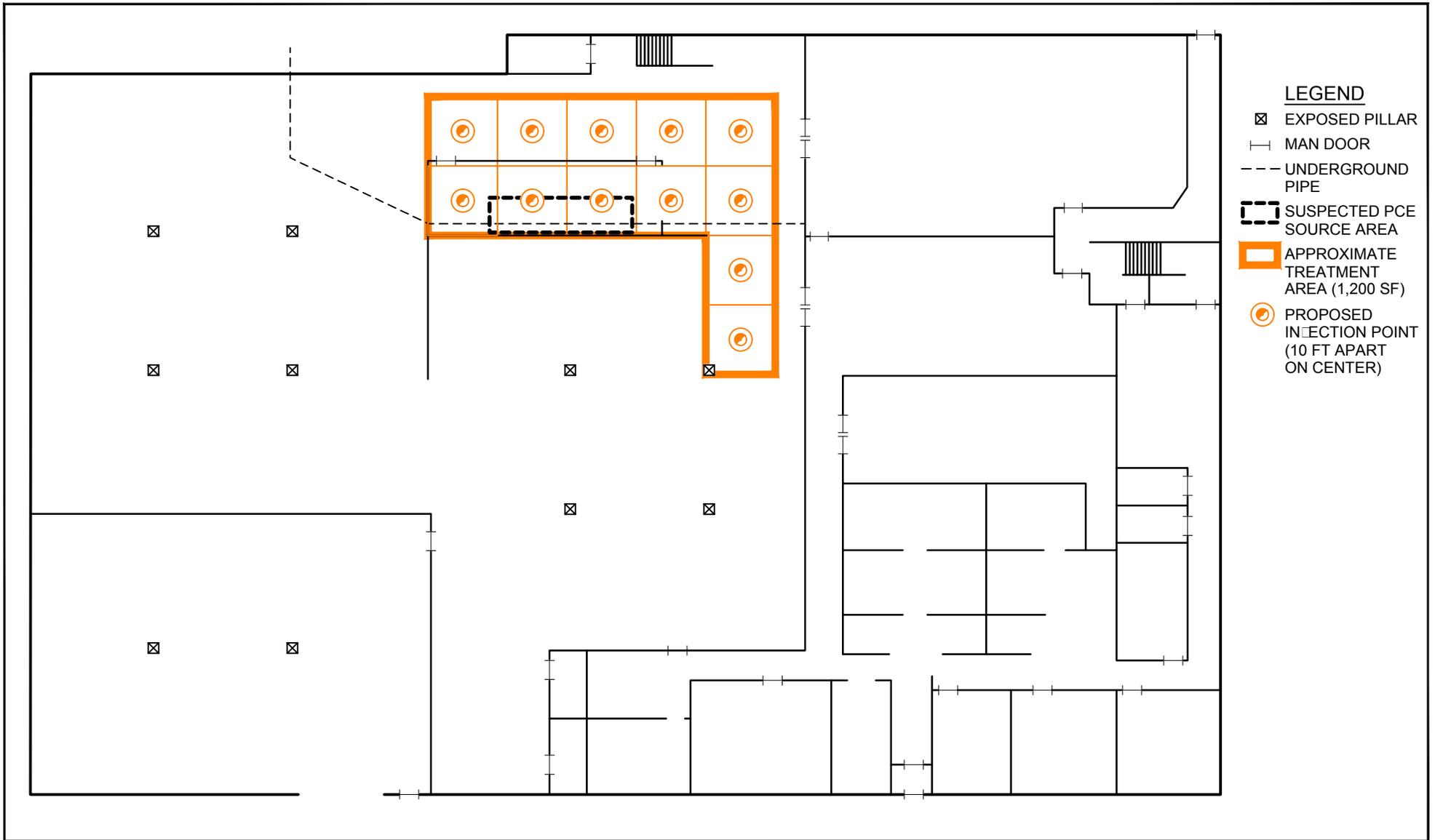


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ALTERNATIVE 1 - AIR SPARGING (AS)

FIGURE 4



- LEGEND**
- ⊠ EXPOSED PILLAR
 - |— MAN DOOR
 - - - UNDERGROUND PIPE
 - ⊠ SUSPECTED PCE SOURCE AREA
 - ▭ APPROXIMATE TREATMENT AREA (1,200 SF)
 - ⊙ PROPOSED INJECTION POINT (10 FT APART ON CENTER)

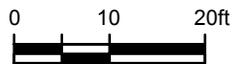
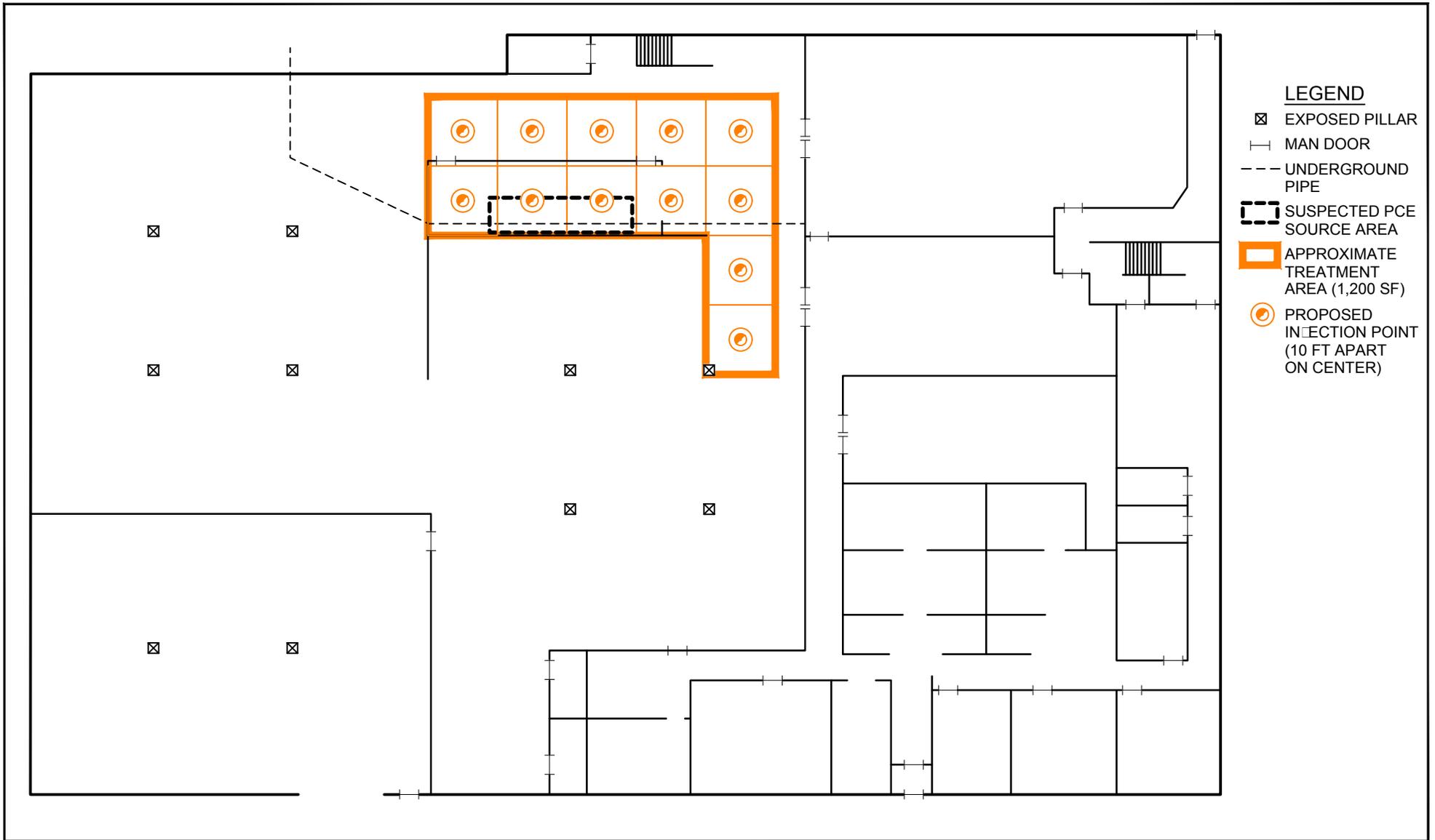


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ALTERNATIVE 2 - IN-SITU CHEMICAL OXIDATION (ISCO)

FIGURE 5

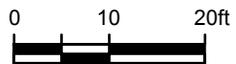
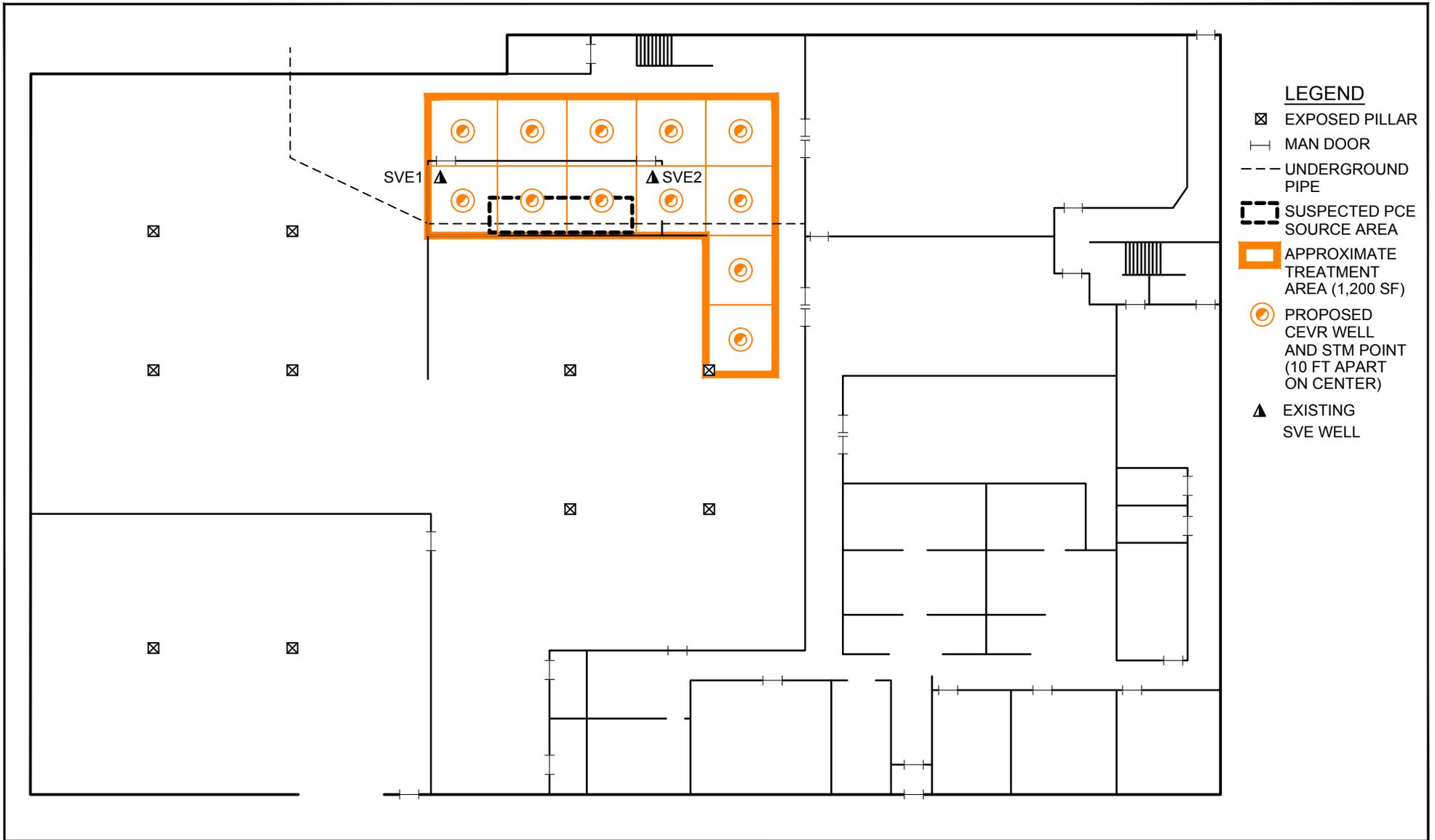


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ALTERNATIVE 3 - BIOAVAILABLE ADSORBENT MEDIA (BAM)

FIGURE 6



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ALTERNATIVE 4 - ELECTRICAL RESISTANCE EATING (ER)

FIGURE 7

Tables

Table 1
Summary of Evaluated Alternatives
Remediation of VOC Contamination in Shallow Groundwater
6714 Walker Street Site
St. Louis Park, Minnesota

Alternative	Technology Description				
	Overview	Major Design Assumptions	Advantages/Capabilities	Disadvantages/Limitations	Measurable Demonstration(s) of Progress/Completion
Alternative 1 - Air Sparging (AS)	<ul style="list-style-type: none"> Inject air into shallow groundwater and capillary fringe to volatilize dissolved CVOCs in groundwater and sorbed CVOCs in saturated soils. Facilitate mass transfer of volatilized VOCs from groundwater and saturated soils to unsaturated zone. Capture volatilized CVOCs using SVE. 	<ul style="list-style-type: none"> Four (4) sparging wells [see Figure 4]. 25-ft radius of influence for sparging wells (placed 25 ft apart on center, for overlap). Sparging interval from 40 to 60 ft bgs. Existing SVE system cannot be used to capture volatilized CVOCs; a larger SVE blower would be required. Off-gas treatment of SVE emissions not required. 	<ul style="list-style-type: none"> Proven technology. Removes CVOCs without creating breakdown daughter products. 	<ul style="list-style-type: none"> Less effective at lower CVOc concentrations (polishing treatment may be required once initial concentrations have been reduced.) Not effective at treating NAPLs, if present. Injection of air/oxygen may interrupt natural (anaerobic) degradation of CVOCs by creating an aerobic environment. Requires structural modification to existing building roof to support AS/SVE equipment, above/below-ground infrastructure and O&M. Requires long-term operation (likely 5 years or more). 	<ul style="list-style-type: none"> Progress/completion measured by comparing pre-and post-treatment concentrations of VOCs in soil and groundwater. Post-treatment performance investigation to include VOC analysis of soil and groundwater samples collected from the suspected source area using DPT borings and groundwater samples collected from existing MW-1A.
Alternative 2 - In-situ Chemical Oxidation (ISCO)	<ul style="list-style-type: none"> Inject an oxidizing reagent (in solution) into shallow groundwater and capillary fringe to destroy dissolved CVOCs in groundwater and sorbed CVOCs in saturated soils by breaking carbon bonds for conversion to nonhazardous compounds (primarily carbon dioxide, chloride ions and water). 	<ul style="list-style-type: none"> 12-15 injection points [see Figure 5]. 5-ft radius of influence for each injection point (placed 10 ft apart on center, no overlap). Injection interval from 40 to 60 ft bgs. Sodium persulfate loading of 8 mg/kg, per bench-scale testing results. 	<ul style="list-style-type: none"> Can be injected using DPT borings with no permanent above/below-ground infrastructure or remediation system O&M. Destroys CVOCs without creating breakdown daughter products. Effective at treating NAPLs, if present. 	<ul style="list-style-type: none"> Requires direct contact between the oxidizer and the contaminant in order to be effective. Multiple injection events may be required. Injection of the oxidant may interrupt natural (anaerobic) degradation of CVOCs by creating an aerobic environment. 	<ul style="list-style-type: none"> Progress/completion measured by comparing pre-and post-treatment concentrations of VOCs in soil and groundwater. Post-treatment performance investigation to include VOC analysis of soil and groundwater samples collected from the suspected source area using DPT borings and groundwater samples collected from existing MW-1A.
Alternative 3 - Bioavailable Absorbent Media (BAM)	<ul style="list-style-type: none"> Inject BAM (carbon surface/source) into shallow groundwater and capillary fringe to increase CVOc absorption and maximize microbial colonization for metabolic treatment/biodegradation. 	<ul style="list-style-type: none"> 12-15 injection points [see Figure 6]. 5-ft radius of influence for each injection points (placed 10 ft apart on center, no overlap) Injection interval from 40 to 60 ft bgs. BAM dose of 3% by weight, per bench-scale testing results. 	<ul style="list-style-type: none"> Can be injected using DPT borings with no permanent above/below-ground infrastructure or remediation system O&M. Effective at treating NAPLs, if present. Can be used as a standalone treatment or polish treatment for other alternatives. 	<ul style="list-style-type: none"> Creates breakdown daughter products of PCE (biodegradation). Less effective as groundwater becomes nutrient deficient. Multiple nutrient injection events may be required. 	<ul style="list-style-type: none"> Progress/completion measured by comparing pre-and post-treatment concentrations of VOCs in soil and groundwater. Post-treatment performance investigation to include VOC analysis of soil and groundwater samples collected from the suspected source area using DPT borings and groundwater samples collected from existing MW-1A.
Alternative 4 - Electrical Resistance Heating (ERH)	<ul style="list-style-type: none"> Install electrodes into shallow groundwater and capillary fringe to create an electrical current that heats groundwater and saturated soils by electrical resistance and volatilizes dissolved CVOCs in groundwater and sorbed CVOCs in saturated soils. Facilitate mass transfer of volatilized VOCs from groundwater and saturated soils to unsaturated zone. Capture volatilized CVOCs using SVE. 	<ul style="list-style-type: none"> 12-15 CEVR locations [see Figure 7]. 5-ft radius of influence for each CEVR location (placed 10 ft apart on center, no overlap). Treatment interval from 40 to 60 ft bgs. 100% below-ground completion. Subcontractor to supply all equipment necessary to capture volatilized CVOCs (existing SVE system cannot be used). Subcontractor to provide off-gas treatment of SVE emissions, if required. 	<ul style="list-style-type: none"> Removes CVOCs without creating breakdown daughter products. Effective at treating NAPLs, if present. Subcontractor provides contract option that guarantees success. 	<ul style="list-style-type: none"> Significant construction and operation effort. High cost. 	<ul style="list-style-type: none"> Progress/completion measured by comparing pre-and post-treatment concentrations of VOCs in soil and groundwater. Post-treatment performance investigation to include VOC analysis of soil and groundwater samples collected from the suspected source area using DPT borings and groundwater samples collected from existing MW-1A.

Table 1
Summary of Evaluated Alternatives
Remediation of VOC Contamination in Shallow Groundwater
6714 Walker Street Site
St. Louis Park, Minnesota

Alternative	Balancing Criteria				
	Long-Term Effectiveness	Reduction of TMV Through Treatment	Short-Term Risk	Implementability	Cost Effectiveness
Alternative 1 - Air Sparging (AS)	<ul style="list-style-type: none"> Permanent remedy. No remaining treatment residuals or untreated wastes once ROs are met. Moderate to high probability of success. 	<ul style="list-style-type: none"> Active treatment technology. Reduces toxicity and volume of CVOC-impacted groundwater and soil by mass transfer, volatilization, and extraction. Irreversible treatment. 	<ul style="list-style-type: none"> Construction: 2-4 weeks Active Remediation: 4 years Total Duration: 5 years (including post-treatment monitoring) Low risk of impacts to the community or Site workers during construction. Potential risk for increasing the plume size if groundwater mounding occurs in the suspected source area during active treatment. 	<ul style="list-style-type: none"> Technically feasible (common, proven technology). Administratively feasible is a concern (building layout will limit where sparging points and conveyance piping can be installed and construction will cause disruption to owner). Specialized contractor services are regionally available. All required materials, including power source, readily available. 	<ul style="list-style-type: none"> Total Cost: \$318,266 [see Appendix B]
Alternative 2 - In-situ Chemical Oxidation (ISCO)	<ul style="list-style-type: none"> Permanent remedy. No remaining treatment residuals or untreated wastes once ROs are met. Moderate to high probability of success. 	<ul style="list-style-type: none"> Active treatment technology. Reduces toxicity and volume of CVOC-impacted groundwater and soil by chemical oxidation. Destroys CVOCs to non-hazardous compounds. Irreversible treatment. 	<ul style="list-style-type: none"> Construction Period: 1 week Active Remediation: 1 year Total Duration: 2 years (including post-treatment monitoring) Low risk of impacts to the environment or community during construction. Potential risk of impacts to Site workers during mixing of the oxidant solution (minimized by HASP). 	<ul style="list-style-type: none"> Technically feasible (common, proven technology; further supported by successful bench-scale testing results). Administratively feasible (no anticipated issues with coordination or permitting). Specialized contractor services are regionally available. Sodium persulfate is readily available in large quantities. 	<ul style="list-style-type: none"> Total Cost: \$223,166 [see Appendix B]
Alternative 3 - Bioavailable Absorbent Media (BAM)	<ul style="list-style-type: none"> Permanent remedy. No remaining treatment residuals or untreated wastes once ROs are met. Moderate to high probability of success as a standalone remedy; high probability of success as polishing treatment. 	<ul style="list-style-type: none"> Active treatment technology. Reduces toxicity, mobility and volume of CVOCs by absorption and microbial colonization/treatment. Immediate absorption by injected media reduces contaminant mobility. Irreversible treatment. 	<ul style="list-style-type: none"> Construction Period: 1 week Active Remediation: 5 years Total Duration: 6 years (including post-treatment monitoring) Low/no risk of impacts to the environment, community, or Site workers during construction. 	<ul style="list-style-type: none"> Technically feasible (common, proven technology; further supported by successful bench-scale testing results). Administratively feasible (no anticipated issues with coordination or permitting). Specialized contractor services are regionally available. BAM is readily available in large quantities. 	<ul style="list-style-type: none"> Total Cost: \$197,530 [see Appendix B]
Alternative 4 - Electrical Resistance Heating (ERH)	<ul style="list-style-type: none"> Permanent remedy. No remaining treatment residuals or untreated wastes once ROs are met. High probability of success. 	<ul style="list-style-type: none"> Active treatment technology. Reduces toxicity and volume of CVOC-impacted groundwater and soil by mass transfer, volatilization, and extraction. Irreversible treatment. 	<ul style="list-style-type: none"> Construction Period: 3-6 months Active Remediation: 3-7 months Total Duration: 2 years (including post-treatment monitoring) Low/no risk of impacts to the environment or community during construction/treatment. Potential risk of impacts to Site workers from power source/electrical currents (minimized by HASP). 	<ul style="list-style-type: none"> Technically feasible (common, proven technology). Administratively feasible is a concern (building layout will limit where belowground infrastructure can be installed and construction will cause disruption to owner). Specialized contractor services are regionally available. All required materials, including power source, readily available. 	<ul style="list-style-type: none"> Total Cost: \$920,812 [see Appendix B]

**Comparative Evaluation of Alternatives
Remediation of VOC Contamination in Shallow Groundwater
6714 Walker Street Site
St. Louis Park, Minnesota**

Alternative	Balancing Criteria [Rank]					Average Rank
	Long-Term Effectiveness	Reduction of TMV Through Treatment	Short-Term Risk	Implementability	Cost Effectiveness	
Alternative 1 - Air Sparging (AS)	4	3	3	3	3	3.2
Alternative 2 - In-Situ Chemical Oxidation (ISCO)	3	1	1	2	2	1.8
Alternative 3 - Bioavailable Absorbent Media (BAM)	2	2	4	1	1	2.0
Alternative 4 - Electrical Resistance Heating (ERH)	1	4	2	4	4	3.0

Appendices

Appendix A
Conceptual Corrective Action
Design Report (CCAD)



Minnesota Pollution Control Agency
 520 Lafayette Road North
 St. Paul, MN 55155-4194

Conceptual Corrective Action Design Report (CCAD)

Petroleum Remediation Program
 Guidance Document 7-02

Doc Type: Corrective Action Design

Instructions: Complete this report to recommend a final corrective action. See Guidance Document 7-01 *Corrective Action Design and Implementation* for more information and requirements. Complete Section 1 if this report is not included as an appendix to Guidance Documents 4-06 *Investigation Report Form* or 4-08 *Monitoring Report*. Complete Section 2 for every corrective action. Complete Section 3 for a simple corrective action or Section 4 for a complex corrective action. Complete Section 5 if a remediation system or other in situ remediation technology is proposed. Do not revise or delete any text or questions from this report form. Items may be added if they are needed to support the corrective action design. If an item is not applicable, provide a brief explanation.

MPCA Leak ID: Not assigned Report date: _____

Responsible Party Information

Name: Daikin Applied Americas Inc. and Super Radiator Coils LP Phone: 651-639-0913
 Mailing address: c/o GHD Services Inc. – 1801 Old Highway 8 NW, Suite 114
 City: St. Paul State: MN Zip code: 55112
 Alternate contact (if any) Harvey Sheldon (Counsel for Daikin Applied Americas Inc.) 312-704-3504
 for responsible party: William Hefner (Counsel for Super Radiator Coils LP) Phone: 612-378-3700

Leak Site Information

Leak site name: 6714 Walker Street Site Phone: 651-639-0913
 Leak site address: 6714 Walker Street
 City: St. Louis Park MN Zip code: 55426 County: Hennepin

Consultant (or other) Information

By signing this document, I/we acknowledge that we are submitting this document on behalf of and as agents of the responsible person or volunteer for this leak site. I/we acknowledge that if information in this document is inaccurate or incomplete, it will delay the completion of remediation and may harm the environment and may result in a reduction in Petrofund reimbursement. In addition, I/we acknowledge on behalf of the responsible person or volunteer for this leak site that if this document is determined to contain a false material statement, representation, or certification, or if it omits material information, the responsible person or volunteer may be found to be in violation of Minn. Stat. § 115.075 (2007) or Minn. R. 7000.0300 (Duty of Candor), and that the responsible person or volunteer may be liable for civil penalties.

Company name: GHD Services, Inc. (GHD)
 Mailing address: 1801 Old Highway 8 NW, Suite #114
 City: St. Paul State: MN Zip code: 55112
 Project manager name: Brian Sandberg Phone: 651-639-0913
 Fax: 651-639-0923 E-mail: Brian.Sandberg@ghd.com

Report Author(s)

Print name: Sarah Illi Title: Engineer
 Signature: _____ Date: _____
 Print name: Brian Sandberg Title: Project Manager/Hydrogeologist
 Signature: _____ Date: _____

Report Reviewer(s)

Print name: Ron Frehner Title: Principal

Signature: _____ Date: _____

Print name: Tim Ree Title: Project Engineer

Signature: _____ Date: _____

Name of field technician(s): Ryan Aamot, Sam Atazadeh

Section 1: Site Conceptual Model Update

Include updated cumulative tables and figures from ~~Guidance Document 4-06 Investigation Report Form~~ in Appendix A. Include documentation of additional site investigation, site monitoring, and interim corrective actions in Appendix B.

1. Describe any additional site investigation, site monitoring, and/or interim corrective actions completed since the last submitted report.

See accompanying Source Area Investigation (SAI) Report

2. Discuss the results of the additional site investigation, site monitoring, and/or interim corrective actions.

See accompanying SAI Report [Section 5]

3. Provide an updated and comprehensive site conceptual model.

See accompanying SAI Report [Section 5.2]

4. Provide recommendations for additional site investigation, site monitoring, and/or interim corrective actions to be completed prior to corrective action design (CAD) approval, including their purpose and schedule for completion.

Not applicable (no recommendations)

Section 2: Final Corrective Action Approach

1. If the CCAD is different than requested by the Minnesota Pollution Control Agency, identify the differences and explain why.

Not applicable (this CCAD has been prepared as part of a voluntary rapid response to address PCE contamination identified in shallow groundwater underneath 6714 Walker Street)

2. Discuss the reason for the proposed corrective action.

See accompanying Evaluation of Remediation Alternatives (ERA) Report [Section 3.1]

3. Discuss the corrective action goal relative to the corrective action reason.

See accompanying ERA Report [Section 3.1]

4. List the two or three most feasible corrective action alternatives. Discuss each alternative's capabilities and limitations relative to achieving the corrective action goal, including major design assumptions, relative life-cycle costs, and implementation time frames. Provide life-cycle cost estimates for each alternative in Appendix C.

See accompanying ERA Report [Section 4.0]

5. Identify the selected corrective action alternative and discuss the rationale for selecting it, including discussion of the cost-effectiveness evaluation, if completed.

See accompanying ERA Report [Section 6.1]

6. Discuss the measurable corrective action objectives that will be used to demonstrate progress towards achieving the corrective action goal and completing the corrective action.

See accompanying ERA Report [Section 4.2]

Section 3: Simple Corrective Action

1. Summarize and reference previously submitted data, analyses, and conclusions that support and form the basis for the

proposed corrective action.

Not applicable (see Section 4)

2. Discuss implementation of the proposed corrective action to the extent adequate to support CAD approval, including activities, methods and procedures, permits, and implementation reporting. Propose a schedule for completing the corrective action.

Not applicable (see Section 4)

3. Identify any contaminated waste types (e.g., gases, liquids, solids) and respective volumes that may be generated by corrective action implementation. Discuss how these wastes will be measured, handled, treated, discharged, and/or disposed of. Contaminated soil removed for treatment should be estimated as in-place cubic yards and supported by providing scaled maps and calculations.

Not applicable (see Section 4)

Section 4: Complex Corrective Action

1. Identify the technical lead responsible for overseeing the design, implementation, and reporting of the corrective action.

Brian Sandberg, Project Manager/Hydrogeologist

2. Identify and briefly discuss any focused investigation work that is recommended before a pilot test work plan or detailed corrective action design report can be completed. Propose a schedule for submitting Guidance Document 7-03 *Focused Investigation Work Plan*.

Not applicable (not recommended)

3. If no focused investigation is recommended, propose a schedule for submitting Guidance Document 7-05 *Pilot Test Work Plan*, Guidance Document 7-07a *Remediation System Detailed Corrective Action Design Report (SDCAD)*, or Guidance Document 7-07b *Excavation Detailed Corrective Action Design Report (EDCAD)*.

See accompanying ERA Report [Section 6.2]

Section 5: Remediation System Conceptual Design

Provide a site map and, if necessary, cross sections showing the estimated horizontal and vertical extents of the target zone and the locations and screened intervals of proposed remediation and monitoring points in Section 6.

1. Describe the targeted contaminant phase(s), chemicals of concern and their behavior, and target-zone geometry and geology.

See accompanying ERA Report [Section 4.2]

2. Discuss the remediation strategy, including the relative timing and magnitude of subsurface physical, chemical, and biological processes that the proposed system will be designed to induce and control.

See accompanying ERA Report [Section 4.2]

3. Describe the location, construction, and screened interval of each proposed remediation and monitoring point in terms of the estimated capture zone or radius of influence.

See accompanying ERA Report [Section 4.2]

4. Discuss the major below- and above-ground equipment (e.g., wells, pumps, compressors, treatment equipment) for the proposed system.

Not applicable (in-situ remediation)

5. Discuss the proposed system's process flow.

Not applicable (in-situ remediation)

6. Identify the waste streams that will be generated during system operation. Discuss how the wastes will be handled and disposed of. Discuss any waste disposal limitations and conditions such as permits, approvals, or compliance monitoring that the wastes may be subject to.

See accompanying ERA Report [Section 4.2]

7. Summarize the proposed system's operation strategy from startup to shutdown and any recommended post-shutdown

monitoring. Integrate the corrective action objectives from Section 2, Item 6, including remediation endpoints and proposed time frames to achieve them.

See accompanying ERA Report [Section 4.2]

8. Briefly describe the operation monitoring plan, including the type of and frequency that data will be collected and how they will be evaluated to determine progress in achieving the corrective action objectives.

Not applicable (in-situ remediation)

9. Describe the pilot test. Describe the types of data to be collected and the results needed to demonstrate technical and economic feasibility of the proposed technology relative to the remediation and operation strategies.

See accompanying ERA Report [Section 6.2]

Section 6: Figures

Attach new figures specific to this report in order of discussion in the text and list below. All figures must include a north arrow, scale, and legend as applicable. Approximate scales are not acceptable. Figures required in Appendix A should not be included in this section.

- One or more site maps showing (as applicable):
- Structures
 - Boring and well locations (including any drinking water wells on site)
 - Suspected source(s) of light non-aqueous phase liquid (LNAPL)
 - Locations and depths of on-site buried utilities
 - All past and present petroleum storage tanks, piping, dispensers, and transfer areas
 - ~~Horizontal extent of LNAPL~~
 - Horizontal extent of the target zone
 - Proposed remediation and monitoring points

Distinguish sequential elements of investigations by dates, symbols, etc. in the legend.

See accompanying ERA Report [Figures]

- Cross sections depicting target-zone geometry, geology, and hydrogeology and preferential flow routes and barriers to flow

See accompanying SAI Report [Figures]

Section 7: Tables

Attach new tables specific to this report in order of discussion in the text and list below. Tables required in Appendix A should not be included in this section.

See accompanying ERA Report [Tables]

Section 8: Appendices

Attach all required or applicable appendices in the following order. Indicate those appendices that are included in this report by marking the check box. All reproduced data must be legible. Attach additional appendices as needed and list below.

- Appendix A* Cumulative and updated tables and figures from ~~Guidance Document 4-06 Investigation Report Form.~~

See accompanying SAI Report [Tables and Figures]

- Appendix B* Additional site investigation, site monitoring, and interim corrective action methods and procedures and associated documentation (boring logs, sampling information forms, laboratory analytical reports, etc.).

See accompanying SAI Report [Appendices]

- Appendix C* Life-cycle cost estimates for each corrective action alternative.

See accompanying ERA Report [Appendix B]

Appendix B

Cost Estimates

Cost Estimate Summary

**Remediation of VOC Contamination in Shallow Groundwater
6714 Walker Street Site
St. Louis Park, Minnesota**

Description	Capital Cost	Annual Cost	Duration (Years)	Cash Flow Discount Rate	Present Worth (Annual Costs)	Contingency	Total Cost
Alternative 1 - Air Sparging (AS)	\$ 130,940	\$ 32,750	5	7%	\$ 134,281	20%	\$ 318,266
Alternative 2 - In-Situ Chemical Oxidation (ISCO)	\$ 181,000	\$ 2,750	2	7%	\$ 4,972	20%	\$ 223,166
Alternative 3 - Bioavailable Asorbent Media (BAM)	\$ 151,500	\$ 2,750	6	7%	\$ 13,108	20%	\$ 197,530
Alternative 4 - Electrical Resistance Heating (ERH)	\$ 918,100	\$ 1,500	2	7%	\$ 2,712	0%	\$ 920,812

Cost Estimate
Alternative 1 - Air Sparging (AS)
Remediation of VOC Contamination in Shallow Groundwater
6714 Walker Street Site
St. Louis Park, Minnesota

Item	Description	Quantity	Unit	Unit Cost	Total Cost	Key Assumptions
Capital Costs						
1	Design Report (RA/RAP/DCAD)	1	EA	\$8,000	\$ 8,000	
2	Implementation (Subcontractor Services)	1	LS	\$53,500	\$ 53,500	See Table 1
3	Implementation (Consultant Costs)	1	LS	\$44,940	\$ 44,940	
4	Post-Treatment Performance Investigation (Subcontractor Services)	1	LS	\$5,000	\$ 5,000	Six DPT borings to 60 ft
5	Post-Treatment Performance Investigation (Laboratory Analysis)	1	LS	\$2,000	\$ 2,000	VOCs (12 soil + 6 water)
6	Post-Treatment Performance Investigation (Consultant Costs)	1	LS	\$10,000	\$ 10,000	Oversight/sampling
7	Implementation/Completion Report (CCR/RSOM)	1	EA	\$7,500	\$ 7,500	
Subtotal - Capital Costs					\$ 130,940	
Annual Costs						
8	Remediation System O&M	12	MO/YR	\$2,500	\$ 30,000	
9	Remediation Monitoring (Laboratory Analysis)	1	EV/YR	\$250	\$ 250	Annual sampling of MW1A
10	Remediation Monitoring (Consultant Costs)	1	EV/YR	\$1,000	\$ 1,000	Annual sampling of MW1A
11	Remediation Reporting	1	EA/YR	\$1,500	\$ 1,500	Annual data report/update
Subtotal - Annual Costs					\$ 32,750	
Duration (Years)					5	
Cash Flow Discount Rate					7%	
Present Worth of Annual Costs					\$ 134,281	
Subtotal - Capital Costs and Present Worth of Annual Costs					\$ 265,221	
Contingency					20%	
TOTAL					\$ 318,266	

Cost Estimate
Alternative 2 - In-Situ Chemical Oxidation (ISCO)
Remediation of VOC Contamination in Shallow Groundwater
6714 Walker Street Site
St. Louis Park, Minnesota

Item	Description	Quantity	Unit	Unit Cost	Total Cost	Key Assumptions
Capital Costs						
1	Design Report (RA/RAP/DCAD)	1	EA	\$8,000	\$ 8,000	
2	Implementation (Subcontractor Services)	1	LS	\$130,000	\$ 130,000	Subcontractor quote
3	Implementation (Consultant Costs)	1	LS	\$19,500	\$ 19,500	
4	Post-Treatment Performance Investigation (Subcontractor Services)	1	LS	\$5,000	\$ 5,000	Six DPT borings to 60 ft
5	Post-Treatment Performance Investigation (Laboratory Analysis)	1	LS	\$1,000	\$ 1,000	VOCs (12 soil + 6 water)
6	Post-Treatment Performance Investigation (Consultant Costs)	1	LS	\$10,000	\$ 10,000	Oversight/sampling
7	Implementation/Completion Report (CCR/RSOM)	1	EA	\$7,500	\$ 7,500	
Subtotal - Capital Costs					\$ 181,000	
Annual Costs						
8	Remediation System O&M	0	MO/YR	\$0	\$ -	No O&M
9	Remediation Monitoring (Laboratory Analysis)	1	EV/YR	\$250	\$ 250	Annual sampling of MW1A
10	Remediation Monitoring (Consultant Costs)	1	EV/YR	\$1,000	\$ 1,000	Annual sampling of MW1A
11	Remediation Reporting	1	EA/YR	\$1,500	\$ 1,500	Annual data report/update
Subtotal - Annual Costs					\$ 2,750	
Duration (Years)					2	
Cash Flow Discount Rate					7%	
Present Worth of Annual Costs					\$ 4,972	
Subtotal - Capital Costs and Present Worth of Annual Costs					\$ 185,972	
Contingency					20%	
TOTAL					\$ 223,166	

Cost Estimate
Alternative 3 - Bioavailable Absorbent Media (BAM)
Remediation of VOC Contamination in Shallow Groundwater
6714 Walker Street Site
St. Louis Park, Minnesota

Item	Description	Quantity	Unit	Unit Cost	Total Cost	Key Assumptions
Capital Costs						
1	Design Report (RA/RAP/DCAD)	1	EA	\$8,000	\$ 8,000	
2	Implementation (Subcontractor Services)	1	LS	\$100,000	\$ 100,000	Subcontractor quote
3	Implementation (Consultant Costs)	1	LS	\$20,000	\$ 20,000	
4	Post-Treatment Performance Investigation (Subcontractor Services)	1	LS	\$5,000	\$ 5,000	Six DPT borings to 60 ft
5	Post-Treatment Performance Investigation (Laboratory Analysis)	1	LS	\$1,000	\$ 1,000	VOCs (12 soil + 6 water)
6	Post-Treatment Performance Investigation (Consultant Costs)	1	LS	\$10,000	\$ 10,000	Oversight/sampling
7	Implementation/Completion Report (CCR/RSOM)	1	EA	\$7,500	\$ 7,500	
Subtotal - Capital Costs					\$ 151,500	
Annual Costs						
8	Remediation System O&M	0	MO/YR	\$0	\$ -	No O&M
9	Remediation Monitoring (Laboratory Analysis)	1	EV/YR	\$250	\$ 250	Annual sampling of MW1A
10	Remediation Monitoring (Consultant Costs)	1	EV/YR	\$1,000	\$ 1,000	Annual sampling of MW1A
11	Remediation Reporting	1	EA/YR	\$1,500	\$ 1,500	Annual data report/update
Subtotal - Annual Costs					\$ 2,750	
Duration (Years)					6	
Cash Flow Discount Rate					7%	
Present Worth of Annual Costs					\$ 13,108	
Subtotal - Capital Costs and Present Worth of Annual Costs					\$ 164,608	
Contingency					20%	
TOTAL					\$ 197,530	

Cost Estimate
Alternative 4 - Electrical Resistance Heating (ERH)
Remediation of VOC Contamination in Shallow Groundwater
6714 Walker Street Site
St. Louis Park, Minnesota

Item	Description	Quantity	Unit	Unit Cost	Total Cost	Key Assumptions
Capital Costs						
1	Design Report (RA/RAP/DCAD)	1	EA	\$10,000	\$ 10,000	
2	Implementation (Subcontractor Services)	1	LS	\$820,000	\$ 820,000	Subcontractor quote
3	Implementation (Consultant Costs)	1	LS	\$65,600	\$ 65,600	
4	Post-Treatment Performance Investigation (Subcontractor Services)	1	LS	\$4,000	\$ 4,000	Six DPT borings to 60 ft
5	Post-Treatment Performance Investigation (Laboratory Analysis)	1	LS	\$1,000	\$ 1,000	VOCs (12 soil + 6 water)
6	Post-Treatment Performance Investigation (Consultant Costs)	1	LS	\$10,000	\$ 10,000	Oversight/sampling
7	Implementation/Completion Report (CCR/RSOM)	1	EA	\$7,500	\$ 7,500	
Subtotal - Capital Costs					\$ 918,100	
Annual Costs						
8	Remediation System O&M	0	MO/YR	\$0	\$ -	Included in Item 2
9	Remediation Monitoring (Laboratory Analysis)	0	EV/YR	\$0	\$ -	Included in Item 2
10	Remediation Monitoring (Consultant Costs)	0	EV/YR	\$0	\$ -	Included in Item 2
11	Remediation Reporting	1	EA/YR	\$1,500	\$ 1,500	Annual data report/update
Subtotal - Annual Costs					\$ 1,500	
Duration (Years)					2	
Cash Flow Discount Rate					7%	
Present Worth of Annual Costs					\$ 2,712	
Subtotal - Capital Costs and Present Worth of Annual Costs					\$ 920,812	
Contingency					0%	Subcontractor guarantee
TOTAL					\$ 920,812	

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